

=> FILE REG

FILE 'REGISTRY' ENTERED ON 9 MAY 2008

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=> D HIS

FILE 'LREGISTRY' ENTERED ON 09 MAY 2008

L1 STR

L2 STR

FILE 'REGISTRY' ENTERED ON 09 MAY 2008

L3 50 S L1

L4 1706 S L1 FUL

SAV L4 TRE551/A

L5 26 S L2 SSS SAM SUB=L4

L6 434 S L2 SSS FUL SUB=L4

SAV L6 TRE551A/A

L7 1272 S L4 NOT L6

FILE 'HCA' ENTERED ON 09 MAY 2008

L8 2380 S L6

L9 898 S L7

L10 92604 S INK?

L11 1322 S INTAGLIO?

L12 243 S L8 AND L10

L13 3 S L8 AND L11

L14 4 S L9 AND L10

L15 0 S L9 AND L11

FILE 'HCAPLUS' ENTERED ON 09 MAY 2008

L16 8246 S LEONARD ?/AU

L17 4741 S DYER ?/AU

L18 8465 S TUCKER ?/AU

L19 260 S HERLIHY ?/AU

L20 1 S L16 AND L17 AND L18 AND L19

SEL RN

FILE 'REGISTRY' ENTERED ON 09 MAY 2008

L21 6 S E1-E6

L22 2 S L21 AND L4

SEL L22 2 RN

L23 1 S E7

FILE 'HCA' ENTERED ON 09 MAY 2008

L24 876 S L23  
L25 102 S L24 AND L12  
L26 2 S L24 AND L11  
L27 141 S L12 NOT L25

FILE 'REGISTRY' ENTERED ON 09 MAY 2008

L28 1 S 75980-60-8  
L29 5 S 75980-60-8/CRN

FILE 'HCA' ENTERED ON 09 MAY 2008

L30 1142 S L28  
L31 141 S L29  
L32 15 S L31 AND L10  
L33 1 S L31 AND L11  
L34 114 S L30 AND L10  
L35 1 S L30 AND L11

FILE 'REGISTRY' ENTERED ON 09 MAY 2008

L36 34 S 7473-98-5/CRN  
L37 5 S L36 AND L4

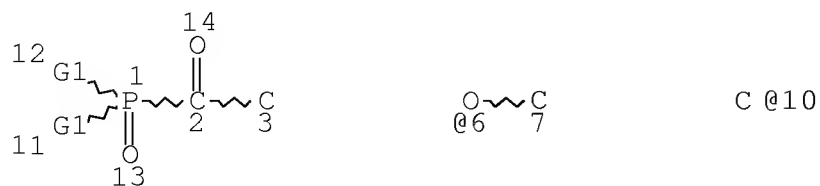
FILE 'HCA' ENTERED ON 09 MAY 2008

L38 287 S L37  
L39 24 S L38 AND L10  
L40 1 S L38 AND L11  
L41 11 S L32 AND L39  
L42 394239 S RADICAL?  
L43 4035 S NONFLUORES? OR NON(A)FLUORES?  
L44 30243 S (VIS# OR VISIBL?) (2A)LIGHT?  
L45 661393 S UV OR UVA OR UVB OR SUV OR LUV OR ULTRAVIOLET? OR ULTRA  
L46 42 S L12 AND L42  
L47 1 S L12 AND L43  
L48 6 S L12 AND L44  
L49 143 S L12 AND L45  
L50 28 S L46 AND L49  
L51 1 S L32 AND L50  
L52 2 S L39 AND L50  
L53 1 S L41 AND L50  
L54 10 S L13 OR L26 OR L33 OR L35 OR L40 OR L47 OR L48 OR L51 OR  
L55 14 S (L32 OR L41) NOT L54  
L56 35 S (L39 OR L50) NOT (L54 OR L55)  
L57 81 S L25 NOT (L54 OR L55 OR L56)  
L58 33087 S SECURE# OR SECURING# OR SECURIT? OR ENCRYPT? OR COUNTER  
L59 2 S L12 AND L58  
L60 0 S L59 NOT (L54 OR L55 OR L56 OR L57)

FILE 'REGISTRY' ENTERED ON 10 MAY 2008

=> D L6 QUE STAT

L1 STR



VAR G1=6/10

NODE ATTRIBUTES:

NSPEC IS RC AT 3

NSPEC IS RC AT 7

NSPEC IS RC AT 10

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

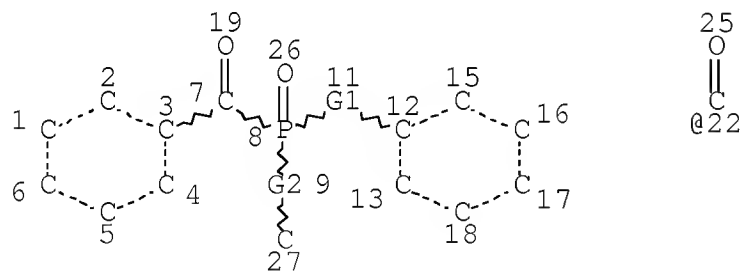
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L2 STR



REP G1=(0-1) 22

REP G2=(0-1) O

NODE ATTRIBUTES:

NSPEC IS RC AT 27

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE  
L4 1706 SEA FILE=REGISTRY SSS FUL L1  
L6 434 SEA FILE=REGISTRY SUB=L4 SSS FUL L2

100.0% PROCESSED 453 ITERATIONS 434 ANSWERS  
SEARCH TIME: 00.00.01

=> FILE HCA  
FILE 'HCA' ENTERED ON 9 MAY 2008  
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(CLAIM 6)

=> D L14 1-4 BIB ABS HITSTR HITIND

L14 ANSWER 1 OF 4 HCA COPYRIGHT 2008 ACS on STN  
AN 142:24666 HCA Full-text  
TI Coating and surface treatment processes for strongly adherent  
surface coatings  
IN Wolf, Jean-Pierre; Kunz, Martin  
PA Ciba Specialty Chemicals Holding Inc., Switz.  
SO PCT Int. Appl., 72 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| -----  | ---- | -----    | -----           |          |
| PI WO 2004103580   | A1   | 20041202 | WO 2004-EP50806 | 20040514 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,<br>CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,<br>GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, |      |          |                 |          |

KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
 MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,  
 SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,  
 VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,  
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,  
 DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL,  
 PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
 GW, ML, MR, NE, SN, TD, TG

CA 2522898 A1 20041202 CA 2004-2522898

200405  
 14

EP 1628778 A1 20060301 EP 2004-741574

200405  
 14

EP 1628778 B1 20070418

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

CN 1791473 A 20060621 CN 2004-80013966

200405  
 14

JP 2007506550 T 20070322 JP 2006-530197

200405  
 14

AT 359873 T 20070515 AT 2004-741574

200405  
 14

MX 2005PA12091 A 20060208 MX 2005-PA12091

200511  
 10

US 20060257681 A1 20061116 US 2005-556609

200511  
 15

PRAI CH 2003-928 A 20030523

WO 2004-EP50806 W 20040514

OS MARPAT 142:24666

AB In a process for the prodn. of a strongly adherent coating on an  
 inorg. or org. substrate, wherein (a), a low-temp. plasma treatment,  
 a corona discharge treatment or a flame treatment is carried out on  
 the inorg. or org. substrate, (b) one or more photoinitiators or  
 mixts. of photoinitiators with monomers or/and oligomers, contg. at  
 least one ethylenically unsatd. group, or solns., suspensions or  
 emulsions of the afore-mentioned substances, are applied to the  
 inorg. or org. substrate, and optionally, (c) using suitable methods  
 those afore-mentioned substances are dried and/or are irradiated with  
 electromagnetic waves, it proves advantageous to use compds. of  
 formula (I), (II), (III) and/or (IV), IN-L-RG (I), IN-L-RG1-L1-H

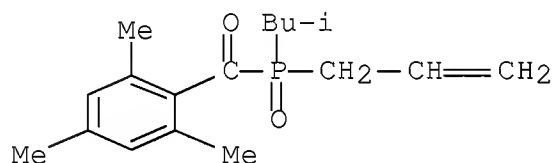
(II), IN-L-RG1-L1-IN1 (III), IN-L-RG1-L1-RG2-L2-IN1 (IV), wherein IN and IN1 are each independently of the others a monoacylphosphine, monoacylphosphine oxide or monoacylphosphine sulfide photoinitiator group; L1 L1 and L2 are a single bond or a spacer group; RG is a monovalent radical having at least one ethylenically unsatd. C = C bond; and RG1 and RG2 are each independently of the other a divalent radical having at least one ethylenically unsatd. C = C bond.

IT 378793-80-7P

(coating and surface treatment processes for strongly adherent surface coatings)

RN 378793-80-7 HCA

CN Phosphine oxide, (2-methylpropyl)-2-propenyl(2,4,6-trimethylbenzoyl)-(9CI) (CA INDEX NAME)



IC ICM B05D003-14

ICS B05D003-08; C07F009-50; C07F009-53

CC 42-2 (Coatings, Inks, and Related Products)

IT Inks

(printing; coating and surface treatment processes for strongly adherent surface coatings)

IT 378793-72-7P 378793-80-7P 800413-23-4P 800413-24-5P

800413-25-6P 800413-26-7P 800413-27-8P 800413-28-9P

800413-30-3P 800413-31-4P

(coating and surface treatment processes for strongly adherent surface coatings)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 4 HCA COPYRIGHT 2008 ACS on STN

AN 116:154013 HCA Full-text

OREF 116:26057a,26060a

TI UV-curable jet-printing inks

IN Toyoda, Tsunehiko; Kanimatsu, Masaaki; Sugawa, Tetsuo

PA Dai Nippon Toryo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

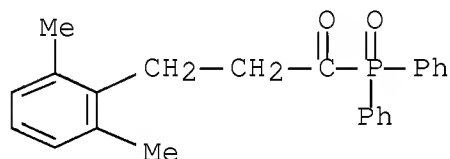
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.<br>-----<br>-----  | KIND<br>---- | DATE<br>----- | APPLICATION NO.<br>----- | DATE         |
|------|---|--------------|---------------|--------------------------|--------------|
| PI   | JP 03258868   | A            | 19911119      | JP 1990-56246            | 199003<br>07 |
|      | JP 06062905   | B            | 19940817      |                          |              |
| PRAI | JP 1990-56246   |              | 19900307      |                          |              |
| OS   | MARPAT 116:154013   |              |               |                          |              |
| AB   | The title storage-stable inks contain UV-permeable resin particles with diam. <3 µm, and optionally acyl phosphine oxides as initiators. Thus, a compn. of 0.1-µm-diam. acrylic polymer particles, TiO <sub>2</sub> , LiNO <sub>3</sub> , a tert-amine, MeOH, 2,4,6- trimethylbenzoyldiphenylphosphine oxide, benzophenone, α-ethylhexyl methacrylate and a 1:1 2-hydroxyethyl acrylate-isophorone diisocyanate adduct showed viscosity 2.5 and 2.7 cP, initially and after 6 mo, resp., and good solvent resistance. |              |               |                          |              |
| IT   | 139958-53-5<br>(initiators, UV-curable inks contg. transparent fine resin spheres and, storage-stable)  |              |               |                          |              |
| RN   | 139958-53-5 HCA   |              |               |                          |              |
| CN   | Phosphine oxide, [3-(2,6-dimethylphenyl)-1-oxopropyl]diphenyl- (CA INDEX NAME)  |              |               |                          |              |



IC ICM C09D011-00  
ICS C09D011-02; C09D011-10  
CC 42-12 (Coatings, Inks, and Related Products)  
ST UV curable jet printing ink; acrylic sphere ink  
storage stability  
IT Acrylic polymers, uses  
Siloxanes and Silicones, uses  
(fine spheres, UV-curable inks contg., for storage  
stability)  
IT Inks  
(jet-printing, UV-curable, storage-stable, contg. fine  
UV-permeable resin spheres)  
IT 98-86-2, Acetophenone, uses 119-61-9, Benzophenone, uses

75980-60-8, 2,4,6-Trimethylbenzoyldiphenylphosphine oxide  
75980-61-9, 2,6-Dimethoxybenzoyldiphenylphosphine oxide 75980-62-0  
139958-53-5

(initiators, UV-curable inks contg. transparent fine  
resin spheres and, storage-stable)

IT 139942-34-0 139942-35-1 139942-36-2  
(inks, contg. transparent fine resin spheres, for  
storage stability)

L14 ANSWER 3 OF 4 HCA COPYRIGHT 2008 ACS on STN

AN 116:131385 HCA Full-text

OREF 116:22237a,22240a

TI UV-curable, jet-printing ink compositions

IN Toyoda, Tsunehiko; Kunimatsu, Masaaki; Sugawa, Tetsuo

PA Dai Nippon Toryo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|----|-------------|------|----------|-----------------|--------------|
|    | -----       | ---- | -----    | -----           |              |
| PI | JP 03258867 | A    | 19911119 | JP 1990-56245   | 199003<br>07 |

JP 06021256 B 19940323

PRAI JP 1990-56245 19900307

OS MARPAT 116:131385

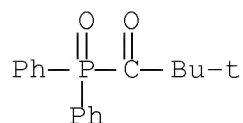
AB Storage-stable title inks contain dyes and acylphosphine oxide  
photoinitiators. Thus, an ink contg. a 1:2 isophorone diisocyanate-  
2-hydroxyethyl acrylate adduct 15.5, 2-ethylhexyl methacrylate 20.6,  
2,4,6-trimethylbenzoyldiphenylphosphine oxide (I) 0.8, Solvent Black  
27 (absorption ratio 0.8) 2.6, MeOH 16.0, ethylene glycol mono-Pr  
ether 1.0, and additives 8.5 parts showed viscosity 3.0 cP initially  
and 3.0 cP after 6-mo storage and formed prints with good solvent  
resistance, vs. 3.0, 3.8, and poor, resp., for an ink contg.  
acetophenone instead of I.

IT 70393-73-6  
(photoinitiators, for storage-stable UV-curable jet-printing  
inks)

RN 70393-73-6 HCA

CN Phosphine oxide, (2,2-dimethyl-1-oxopropyl)diphenyl- (CA INDEX  
NAME)





IC ICM C09D011-00  
ICS C09D011-02; C09D011-10

CC 42-12 (Coatings, Inks, and Related Products)

ST jet printing ink UV curable; acylphosphine oxide  
photoinitiator printing ink; benzoylphosphine oxide  
photoinitiator printing ink; acrylate copolymer UV curable  
ink; methacrylate copolymer UV curable ink;  
storage stability jet printing ink

IT Epoxy resins, uses  
(acrylic, binders, for storage-stable UV-curable jet-printing  
inks)

IT Inks  
(jet-printing, photocurable, storage-stable, contg. acylphosphine  
oxide photoinitiators)

IT Crosslinking catalysts  
Polymerization catalysts  
(photochem., acylphosphine oxides, for storage-stable  
jet-printing inks)

IT Urethane polymers, compounds  
(polyester-, acrylates, binders, contg. vinylpyrrolidone, for  
storage-stable UV-curable jet-printing inks)

IT 131075-72-4 139605-97-3 139605-98-4  
(binders, for storage-stable UV-curable jet-printing inks  
)

IT 70393-73-6 75980-60-8, 2,4,6-Trimethylbenzoyldiphenylphosp  
hine oxide 75980-61-9, 2,6-Dimethoxybenzoyldiphenylphosphine oxide  
75980-62-0  
(photoinitiators, for storage-stable UV-curable jet-printing  
inks)

L14 ANSWER 4 OF 4 HCA COPYRIGHT 2008 ACS on STN

AN 101:131796 HCA Full-text

OREF 101:20061a,20064a

TI Photopolymerizable compositions and their use

IN Henne, Andreas; Schornick, Gunnar

PA BASF A.-G. , Fed. Rep. Ger.

SO Ger. Offen., 15 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

|    | PATENT NO.<br>----- | KIND<br>---- | DATE<br>----- | APPLICATION NO.<br>----- | DATE         |
|----|---------------------|--------------|---------------|--------------------------|--------------|
| PI | DE 3236026          | A1           | 19840329      | DE 1982-3236026          | 198209<br>29 |
|    | EP 106176           | A1           | 19840425      | EP 1983-109160           | 198309<br>16 |

EP 106176 B1 19860820

R: BE, DE, FR, GB, IT, NL, SE

PRAI DE 1982-3236026 A 19820929

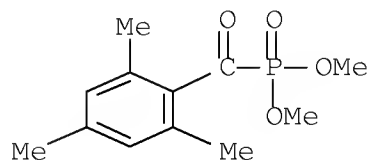
OS MARPAT 101:131796

AB Photopolymerizable compns. comprise [A] olefinic unsatd. compds., [B] a photoinitiator of type RR'P(X)nCOR2 (R = aliph. or arom. hydrocarbyl or hydrocarbyloxy; R' = R, NR3R4; R2 = tertiary alkyl or cycloalkyl, heterocyclic ring, or substituted heterocyclic ring; R3, R4 = H, linear or branched C≤18 alkyl, cyclohexyl, cyclopentyl, C2-4 hydroxyalkyl, or Ph; X = O, S; n = 0, 1), [C] Na, K, or Li salt of an org. acid, and [D] a solvent for C. The compns. are useful for coatings, printing plates, and UV-curable printing inks. Thus, 65 parts bisphenol A diglycidyl ether diacrylate and 3 parts 1,6-hexanediol diacrylate were mixed with 3 parts (2,4,6-trimethylbenzoyl)diphenylphosphine oxide [75980-60-8] and 5 parts 20% aq. soln. of Li octylsulfonate [29726-45-2] and coated 80 μ-thick on a glass plate. The compn. was photocured using a Hg lamp to a scratch-resistant coating with max. curing speed 150 m/min.

IT 91998-28-6  
(photoinitiators, contg. lithium octylsulfonate, for epoxy acrylate compns.)

RN 91998-28-6 HCA

CN Phosphonic acid, (2,4,6-trimethylbenzoyl)-, dimethyl ester (9CI)  
(CA INDEX NAME)



IC C08F002-50; C09D003-727; C09D011-10; G03C001-68; G03F007-26;  
C08J003-28; C08L067-06; C08L063-10

CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 42, 74  
IT 84434-11-7 91998-28-6  
(photoinitiators, contg. lithium octylsulfonate, for epoxy  
acrylate compns.)

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(CLAIM 7)

(CITATION DIRECTLY BELOW MIGHT BE A START)

=> D L59 2 BIB ABS HITSTR HITIND

L59 ANSWER 2 OF 2 HCA COPYRIGHT 2008 ACS on STN  
AN 141:297471 HCA Full-text  
TI Ink-jet ink composition and method for  
security marking  
IN Kozee, Michael; Looman, Steven D.; Folkers, John P.  
PA Videojet Technologies Inc., UK  
SO PCT Int. Appl., 72 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

|     | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE         |
|-----|--|------|----------|-----------------|--------------|
|     | -----  | ---- | -----    | -----           |              |
| PI  | WO 2004081125  | A1   | 20040923 | WO 2004-EP2652  | 200403<br>15 |
| W:  | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,<br>CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,<br>GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,<br>KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,<br>MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,<br>SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,<br>VC, VN, YU, ZA, ZM, ZW |      |          |                 |              |
| RW: | BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,<br>AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,<br>DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT,<br>RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,<br>ML, MR, NE, SN, TD, TG   |      |          |                 |              |
|     | US 20040220298   | A1   | 20041104 | US 2004-800426  |              |

200403  
12

US 7147801 B2 20061212  
EP 1601729 A1 20051207 EP 2004-720592

200403  
15

EP 1601729 B1 20060621  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,  
PL, SK  
CN 1788057 A 20060614 CN 2004-80012856

200403  
15

PRAI US 2003-453940P P 20030313  
US 2004-800426 A 20040312  
WO 2004-EP2652 W 20040315

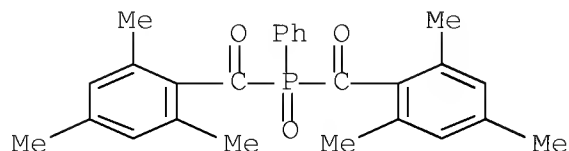
AB The ink compn. comprises a luminescent compd. (e.g., an europium organo complex dye), a solvent, and an energy active compd. (e.g., a cationic photoinitiator, a halogenated photoacid generator), and optionally a non-luminescent colorant. The energy active compd., when exposed to energy (e.g., UV irradiation), generates  $\geq 1$  active species that can react with the luminescent compd. to alter  $\geq 1$  of the characteristics of the luminescent compd. The luminescent compd. can be colored or colorless. A method for marking substrates comprises providing a mark comprising a luminescent compd. and an energy active compd. Further disclosed is a jet ink compn. suitable for printing on substrates authentication or security marks which can be rendered unreadable. The luminescence of the mark is quenched and the visible color is changed when irradiated with a light.

IT 162881-26-7, Bis(2,4,6-trimethylbenzoyl)-phenylphosphine oxide

(energy active compd.; luminescent ink-jet ink compns. and method for security marking)

RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)-  
(CA INDEX NAME)]

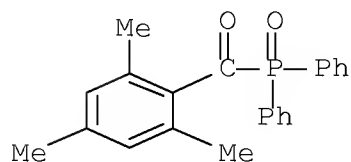


IT 75980-60-8, Darocur TPO

(photoinitiator; luminescent ink-jet ink  
compns. and method for security marking)

RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX  
NAME)



IC ICM C09D011-00

CC 42-12 (Coatings, Inks, and Related Products)

ST cationic photoinitiator jet printing ink security  
marking; luminescent dye jet printing ink security  
marking; halogenated photoacid generator dye jet printing  
ink security marking; authentication  
security mark jet printing ink

IT Polymerization catalysts  
(cationic, photochem.; luminescent ink-jet ink  
compns. and method for security marking)

IT Marking  
(covert; luminescent ink-jet ink compns. and  
method for security marking)

IT Luminescent substances  
(dyes; luminescent ink-jet ink compns. and  
method for security marking)

IT Onium compounds  
(iodonium, photoinitiator; luminescent ink-jet  
ink compns. and method for security marking)

IT Inks  
(jet-printing, luminescent; luminescent ink-jet  
ink compns. and method for security marking)

IT Dyes  
(luminescent; luminescent ink-jet ink compns.  
and method for security marking)

IT Azo dyes  
(non-luminescent; luminescent ink-jet ink  
compns. and method for security marking)

IT Onium compounds  
Sulfonium compounds  
(photoinitiator; luminescent ink-jet ink  
compns. and method for security marking)

IT Diazonium compounds  
(salts, photoinitiator; luminescent ink-jet ink  
compns. and method for security marking)

IT 7440-53-1D, Europium, organo complexes  
(dyes; luminescent ink-jet ink compns. and  
method for security marking)

IT 3194-55-6, 1,2,5,6,9,10-Hexabromocyclododecane 160509-78-4  
162381-26-7, Bis(2,4,6-trimethylbenzoyl)-phenylphosphine  
oxide 761436-13-9  
(energy active compd.; luminescent ink-jet ink  
compns. and method for security marking)

IT 79-08-3, Bromoacetic acid 79-27-6, 1,1,2,2-Tetrabromoethane  
80-58-0, 2-Bromobutyric acid 81-88-9 96-13-9,  
2,3-Dibromopropan-1-ol 105-36-2, Ethyl bromoacetate 477-73-6,  
Safranin 495-54-5, Solvent Orange 3 509-34-2, Solvent Red 49  
598-21-0, Bromoacetyl bromide 598-72-1, 2-Bromopropionic acid  
896-05-9 989-38-8, Basic Red 1 2321-07-5, Fluorescein  
2390-59-2, Basic Violet 4 2481-94-9, Solvent Yellow 56  
4215-95-6, Euchrysine 5437-45-6, Benzylbromoacetate 13463-67-7,  
Titanium oxide, uses 138529-81-4, DAM 301 170905-50-7, Lumilux  
CD 331 189200-57-5, Lumilux Red CD 332 762276-33-5, Lumilux CDE  
9411 762276-34-6, Lumilux CD 316 762276-35-7, Lumilux CD 333  
762276-51-7, Alberta Yellow HMS 34 762276-69-7, SmartDYE UR 3  
(luminescent ink-jet ink compns. and method  
for security marking)

IT 75-80-9, Tribromoethanol 335-57-9, Perfluoroheptane 1522-92-5,  
Tribromoneopentyl alcohol 4101-68-2, 1,10-Dibromodecane  
5401-62-7, 1,2-Dibromocyclohexane 34684-40-7, SI 105 42573-57-9,  
TAZ 100 762275-34-3, PYR 100 762275-69-4, CGI 263  
(photoacid generator; luminescent ink-jet ink  
compns. and method for security marking)

IT 119-61-9, Benzophenone, uses 3115-68-2, Tetrabutylphosphonium  
bromide 7473-98-5, Darocur 1173 75980-60-3, Darocur TPO  
344562-80-7, CGI 552 390388-69-9, Cyracure UVI 6976  
(photoinitiator; luminescent ink-jet ink  
compns. and method for security marking)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D L54 1-10 BIB ABS HITSTR HITIND

L54 ANSWER 1 OF 10 HCA COPYRIGHT 2008 ACS on STN  
AN 145:9816 HCA Full-text  
TI Radiation-curable, electrically conductive ink and method  
for producing a conductive substrate therefrom  
IN Yang, Yongshu

PA Peop. Rep. China  
 SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 14 pp.  
 CODEN: CNXXEV  
 DT Patent  
 LA Chinese  
 FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO.  | DATE     |
|----|------------|------|----------|------------------|----------|
|    | -----      | ---- | -----    | -----            |          |
| PI | CN 1730574 | A    | 20060208 | CN 2005-10036561 | 20050818 |

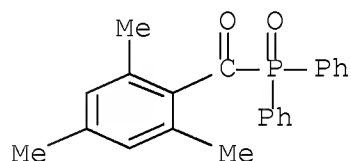
PRAI CN 2005-10036561 20050818

AB The title ink is composed of conductive powder having an Ag content <90%; a coating layer formed on the surface of conductive powder and having an Ag content >30%; coated conductive powder having an av. particle size <40 µm; and photosensitive resin mixt. having a viscosity of <5000 cPs at 25°; wherein the wt. of coating layer is <80% of the total wt. of conductive powder and coating layer. The inventive elec. conductive ink is curable through chem. crosslinking by radiation of UV, visible light or electron beam.

IT 75980-60-8, Diphenyl-(2,4,6-trimethylbenzoyl) phosphine oxide 162881-26-7, Irgacure 819  
 (radiation-curable and elec. conductive ink compns.)

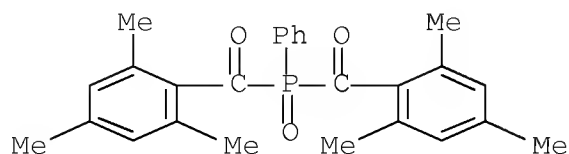
RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)- (CA INDEX NAME)



CC 42-12 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 76  
 ST radiation curable elec conductive ink compn substrate  
 IT Inks  
     (printing, radiation-curable; radiation-curable and elec.  
     conductive ink compns.)  
 IT Electric conductors  
     (radiation-curable and elec. conductive ink compns.)  
 IT 75081-21-9, Isopropyl thioxanthone 75980-60-8,  
 Diphenyl-(2,4,6-trimethylbenzoyl) phosphine oxide  
 162881-26-7, Irgacure 819  
     (radiation-curable and elec. conductive ink compns.)  
 IT 123-31-9, Hydroquinone, uses 150-76-5, Hydroquinone methyl ether  
 10287-53-3, Ethyl 4-(dimethylamino) benzoate 142770-42-1,  
 1-Chloro-4-propoxythioxanthone  
     (radiation-curable and elec. conductive ink compns.)  
 IT 7440-22-4, Silver, uses  
     (radiation-curable and elec. conductive ink compns.)

L54 ANSWER 2 OF 10 HCA COPYRIGHT 2008 ACS on STN

AN 143:407144 HCA Full-text

TI Photoinitiators for use in intaglio printing inks

IN Leonard, Michael William; Dyer, John Albert Edward; Tucker, James  
 Robert; Herlihy, Shaun Lawrence

PA Sun Chemical Corporation, USA

SO PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE         |
|----|---------------|------|----------|-----------------|--------------|
|    | -----         | ---- | -----    | -----           |              |
|    | -----         |      |          |                 |              |
| PI | WO 2005097925 | A1   | 20051020 | WO 2005-US10850 | 200503<br>30 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,  
 CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
 GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,  
 KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
 MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD,  
 SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US,  
 UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,



AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ,  
 DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC,  
 NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA,  
 GN, GQ, GW, ML, MR, NE, SN, TD, TG

|   |    |          |                  |          |
|---|----|----------|------------------|----------|
| GB 2412660  | A  | 20051005 | GB 2004-7473     | 20040401 |
| GB 2418204  | A  | 20060322 | GB 2004-20968    | 20040921 |
| GB 2422611  | A  | 20060802 | GB 2005-2057     | 20050201 |
| AU 2005230836   | A1 | 20051020 | AU 2005-230836   | 20050330 |
| CA 2562991  | A1 | 20051020 | CA 2005-2562991  | 20050330 |
| EP 1751240  | A1 | 20070214 | EP 2005-730999   | 20050330 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR |    |          |                  |          |
| CN 1961051  | A  | 20070509 | CN 2005-80017916 | 20050330 |
| BR 2005008803   | A  | 20070807 | BR 2005-8803     | 20050330 |
| JP 2007531808   | T  | 20071108 | JP 2007-506537   | 20050330 |
| MX 2006PA11257  | A  | 20070126 | MX 2006-PA11257  | 20060929 |
| NO 2006004927   | A  | 20061221 | NO 2006-4927     | 20061027 |
| IN 2006DN06373  | A  | 20070831 | IN 2006-DN6373   | 20061030 |
| US 20070266869  | A1 | 20071122 | US 2007-599551   | 20070322 |
| PRAI GB 2004-7473   | A  | 20040401 |                  |          |
| GB 2004-20968   | A  | 20040921 |                  |          |

GB 2005-2057 A 20050201

WO 2005-US10850 W 20050330

OS MARPAT 143:407144

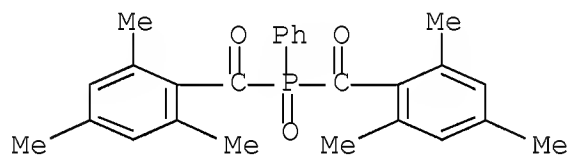
AB An intaglio printing ink, curing by free radical acrylate chem., which does not fluoresce in at least the visible region under UV light is prepd. by using an acylphosphine oxide as the photoinitiator. This ink is useful in security applications.

IT 162881-26-7, Irgacure 819 189146-15-4

(acylphosphine oxide photoinitiators for UV-curable nonfluorescent intaglio printing inks for security documents)

RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinyldiene)bis[1-(2,4,6-trimethylphenyl)- (CA INDEX NAME)



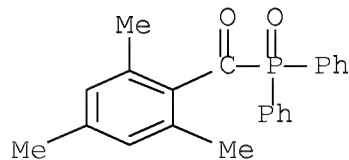
RN 189146-15-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with (diphenylphosphinyl) (2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

CM 1

CRN 75980-60-8

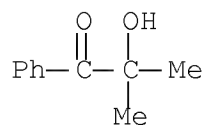
CMF C22 H21 O2 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



IC ICM C09D011-02  
ICS C09D011-10; B41M001-10

CC 42-3 (Coatings, Inks, and Related Products)

ST UV curable intaglio printing ink  
nonfluorescent acylphosphine oxide photoinitiator; security  
ink acylphosphine photoinitiator

IT Epoxy resins, uses  
(acrylates; acylphosphine oxide photoinitiators for UV  
-curable nonfluorescent intaglio printing  
inks for security documents)

IT Inks  
(intaglio; acylphosphine oxide photoinitiators for  
UV-curable nonfluorescent intaglio  
printing inks for security documents)

IT Catalysts  
(photochem.; acylphosphine oxide photoinitiators for UV  
-curable nonfluorescent intaglio printing  
inks for security documents)

IT Inks  
(printing, UV-curable; acylphosphine oxide  
photoinitiators for UV-curable nonfluorescent  
intaglio printing inks for security documents)

IT Information systems  
(security documents; acylphosphine oxide photoinitiators for  
UV-curable nonfluorescent intaglio  
printing inks for security documents)

IT 162881-26-7, Irgacure 819 189146-15-4  
(acylphosphine oxide photoinitiators for UV-curable  
nonfluorescent intaglio printing inks  
for security documents)

IT 25300-64-5, SMA 1440F  
(cobinder; acylphosphine oxide photoinitiators for UV  
-curable nonfluorescent intaglio printing  
inks for security documents)

IT 867030-25-9P, Ebecryl 648-tripropylene glycol diacrylate copolymer  
867030-26-0P, Ebecryl 657-Sartomer 494 copolymer 867143-24-6P, CN  
104-Sartomer 494 copolymer  
(cured ink; acylphosphine oxide photoinitiators for

UV-curable nonfluorescent intaglio  
printing inks for security documents)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 3 OF 10 HCA COPYRIGHT 2008 ACS on STN  
AN 143:348870 HCA Full-text  
TI Energy-curable intaglio printing inks  
IN Leonard, Michael William; Dyer, John Albert Edward  
PA Sun Chemical Limited, UK  
SO Brit. UK Pat. Appl., 15 pp.  
CODEN: BAXXD  
DT Patent  
LA English  
FAN.CNT 3

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| -----         | ---- | -----    | -----           |          |
| GB 2412660    | A    | 20051005 | GB 2004-7473    | 20040401 |
| AU 2005230830 | A1   | 20051020 | AU 2005-230830  | 20050330 |
| AU 2005230836 | A1   | 20051020 | AU 2005-230836  | 20050330 |
| CA 2562991    | A1   | 20051020 | CA 2005-2562991 | 20050330 |
| CA 2562994    | A1   | 20051020 | CA 2005-2562994 | 20050330 |
| WO 2005097927 | A1   | 20051020 | WO 2005-US10719 | 20050330 |

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RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA,

GN, GQ, GW, ML, MR, NE, SN, TD, TG  
WO 2005097925 A1 20051020 WO 2005-US10850

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SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US,  
UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,  
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NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1751240 A1 20070214 EP 2005-730999

200503  
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IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR  
EP 1751241 A1 20070214 EP 2005-731476

200503  
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IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR  
CN 1961051 A 20070509 CN 2005-80017916

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CN 1961052 A 20070509 CN 2005-80017917

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BR 2005008803 A 20070807 BR 2005-8803

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BR 2005008799 A 20070904 BR 2005-8799

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JP 2007531808 T 20071108 JP 2007-506537

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JP 2008503599 T 20080207 JP 2007-506515

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MX 2006PA11257 A 20070126 MX 2006-PA11257

200609  
29

|    |             |    |          |    |              |              |
|----|-------------|----|----------|----|--------------|--------------|
| MX | 2006PA11258 | A  | 20070126 | MX | 2006-PA11258 | 200609<br>29 |
| NO | 2006004927  | A  | 20061221 | NO | 2006-4927    | 200610<br>27 |
| NO | 2006004928  | A  | 20061221 | NO | 2006-4928    | 200610<br>27 |
| IN | 2006DN06373 | A  | 20070831 | IN | 2006-DN6373  | 200610<br>30 |
| US | 20070179211 | A1 | 20070802 | US | 2007-599537  | 200703<br>02 |
| US | 20070266869 | A1 | 20071122 | US | 2007-599551  | 200703<br>22 |

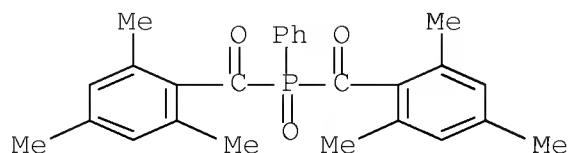
PRAI GB 2004-7473 A 20040401  
 GB 2004-20968 A 20040921  
 GB 2005-2057 A 20050201  
 WO 2005-US10719 W 20050330  
 WO 2005-US10850 W 20050330

AB An energy-curable intaglio printing ink comprises a pigment, an energy-curable binder compn., a photoinitiator, and a plasticizer. By incorporating a plasticizer into the printing ink the wiping ability of the printing ink is improved. The plasticizer is preferably a food grade compd. and may preferably be a sebacate, a citrate, or a toluenesulfonamide. An example ink contained Ebecryl 657 30, SMA 1440F 10, Sartomer 494 17, LGLD (blue pigment) 5, Irgacure 819 4.9, talc D2002 20.1, carnauba wax 3, surfactant 4, sulfonated castor oil 2, di-Bu sebacate 3, and UV stabilizer 1%.

IT 162881-26-7, Irgacure 819  
 (plasticizer for intaglio printing inks for improved wipability)

RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinyldiene)bis[1-(2,4,6-trimethylphenyl)-  
 (CA INDEX NAME)



IC ICM C09D011-10  
CC 42-12 (Coatings, Inks, and Related Products)  
ST sebacate plasticizer photocurable intaglio printing ink  
wipability  
IT Polyesters, uses  
(acrylate-terminated; plasticizer for intaglio printing  
inks for improved wipability)  
IT Epoxy resins, uses  
(acrylates; plasticizer for intaglio printing inks for  
improved wipability)  
IT Inks  
(intaglio; plasticizer for intaglio printing  
inks for improved wipability)  
IT Catalysts  
(photochem.; plasticizer for intaglio printing inks for  
improved wipability)  
IT Pigments, nonbiological  
Plasticizers  
(plasticizer for intaglio printing inks for improved  
wipability)  
IT Inks  
(printing, photocurable; plasticizer for intaglio  
printing inks for improved wipability)  
IT 162881-26-7, Irgacure 819  
(plasticizer for intaglio printing inks for improved  
wipability)  
IT 109-43-3, Dibutyl sebacate  
(plasticizer for intaglio printing inks for improved  
wipability)  
IT 25300-64-5, SMA 1440F 51728-26-8, Sartomer 494 102641-31-6,  
Ebecryl 657 865783-63-7, Ebecryl 648  
(plasticizer for intaglio printing inks for improved  
wipability)  
IT 147-14-8, Irgalite Blue LGLD 14807-96-6, Microtalc IT extra, uses  
(plasticizer for intaglio printing inks for improved  
wipability)  
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 4 OF 10 HCA COPYRIGHT 2008 ACS on STN  
AN 143:173564 HCA Full-text  
TI Visible light-inducible photoinitiator  
composition and its use  
IN Zhou, Lihui; Li, Dongmin; Wiu, Guanzhou  
PA Zhuhai Dongcheng Chemical Co., Ltd., Peop. Rep. China  
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, No pp. given

CODEN: CNXXEV

DT Patent  
LA Chinese  
FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------|------|----------|-----------------|----------|
|    | -----      | ---- | -----    | -----           |          |
| PI | CN 1526740 | A    | 20040908 | CN 2003-105102  | 20030303 |

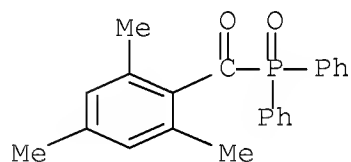
PRAI CN 2003-105102 20030303

AB The compn. comprises a photoinitiator and cophotoinitiator in a ratio of 1 : 0.5-30, wherein the photoinitiator is  $\alpha$ -cracking and/or hydrogen-eliminating free-radical photoinitiator; and the co-photoinitiator is alkyl hydroxy amine, dimethylamino benzoate and/or amine-modified acrylate monomer. Thus, a clear coating compn. comprising bisphenol A epoxy resin diacrylate 40, tripropylene glycol diacrylate 15, trimethylolpropane triacrylate 17, an initiator contg. isopropylthioxanthone and diethylamine-modified trimethylolpropane triacrylate 18, talc powder 10 parts was UV-cured, showing curing time 5 s.

IT 75980-60-8, 2,4,6-Trimethylbenzoyl diphenyl phosphine oxide  
84434-11-7 151250-02-1, Bis(2,6-dimethylbenzoyl)-  
2,4,4-trimethylpentyl phosphine oxide 162881-26-7,  
Bis(2,4,6-trimethylbenzoyl) phenyl phosphine oxide  
(visible light-inducible photoinitiator  
compn. for photocurable material)

RN 75980-60-8 HCA

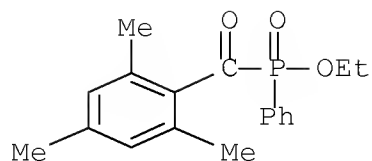
CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



RN 84434-11-7 HCA

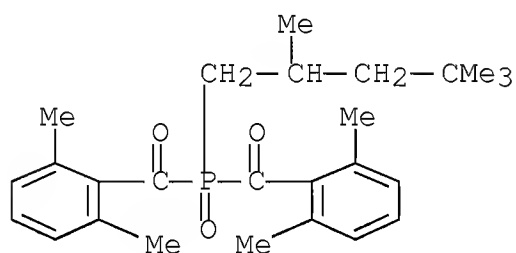
CN Phosphinic acid, P-phenyl-P-(2,4,6-trimethylbenzoyl)-, ethyl ester  
(CA INDEX NAME)





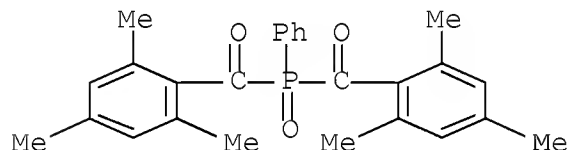
RN 151250-02-1 HCA

CN Phosphine oxide, bis(2,6-dimethylbenzoyl) (2,4,4-trimethylpentyl)-  
(CA INDEX NAME)



RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)-  
(CA INDEX NAME)



IC ICM C08F002-50

ICS C09D004-02; C09J004-02

CC 35-3 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 37, 38, 42, 74

ST photoinitiator visible light inducible

IT Polyesters, preparation

Polyurethanes, preparation

(acrylates, reaction products with acrylate monomers;  
visible light-inducible photoinitiator compn.  
for photocurable material)

IT Polyoxyalkylenes, preparation  
(acrylic-polyester-; visible light-inducible  
photoinitiator compn. for photocurable material)

IT Polyesters, preparation  
Polyurethanes, preparation  
(acrylic-polyoxyalkylene-; visible light  
-inducible photoinitiator compn. for photocurable material)

IT Inks  
(printing; visible light-inducible  
photoinitiator compn. for photocurable material)

IT Adhesives  
Coating materials  
Polymerization catalysts  
(visible light-inducible photoinitiator  
compn. for photocurable material)

IT 102-71-6, Triethanolamine, uses 109-83-1, Methylethanolamine  
109-89-7D, Diethylamine, reaction product acrylic monomers  
3424-21-3, Tri(isopropyl)amine 10287-53-3, 4-Dimethylaminobenzoic  
acid, ethyl ester 15625-89-5D, Trimethylolpropane triacrylate,  
amine-modified  
(co-photoinitiator; visible light-inducible  
photoinitiator compn. for photocurable material)

IT 86-39-5 98-86-2, Phenyl methyl ketone, uses 119-61-9, Diphenyl  
ketone, uses 134-84-9 134-85-0 492-22-8, 10-Thioxanthone  
492-98-8, 2,2'-Biimidazolyl 582-24-1 606-28-0 2648-61-5  
7473-98-5, 2-Hydroxy-2-methyl-1-phenyl-1-propanone 10373-78-1,  
Camphorquinone 21245-02-3, 4-Dimethylaminobenzoic acid,  
2-ethylhexyl ester 24650-42-8, 2,2-Dimethoxy-2-phenyl acetophenone  
36677-67-5 41996-78-5, 2,2-Diethoxy-2-phenyl acetophenone  
55426-74-9, Ethyl 2-dimethylaminobenzoate 69673-85-4,  
1-(4-Isopropylphenyl)-2-Hydroxy-2-methyl-1-propanone 73507-02-5  
75081-21-9 75980-60-8, 2,4,6-Trimethylbenzoyl diphenyl  
phosphine oxide 76293-13-5 79044-56-7 82799-44-8 83846-85-9  
84434-11-7 106797-53-9, 1-[4-(2-Hydroxyethoxy)phenyl]-2-  
hydroxy-2-methyl-1-propanone 107690-02-8 119313-12-1  
151250-02-1, Bis(2,6-dimethylbenzoyl)-2,4,4-trimethylpentyl  
phosphine oxide 155731-74-1 162881-26-7,  
Bis(2,4,6-trimethylbenzoyl) phenyl phosphine oxide  
(visible light-inducible photoinitiator  
compn. for photocurable material)

IT 28961-43-5DP, Ethoxylated trimethylolpropane triacrylate, polymers  
with acrylate monomers 53879-54-2DP, Propoxylated  
trimethylolpropane triacrylate, polymers with acrylate monomers  
55818-57-0DP, Bisphenol A-epichlorohydrin copolymer acrylate,  
polymers with acrylate monomers 861260-04-0P 861260-05-1P  
861387-78-2P, Bisphenol A-epichlorohydrin copolymer,  
acrylate-trimethylene glycol diacrylate-trimethylolpropane

triacrylate copolymer  
(visible light-inducible photoinitiator  
compn. for photocurable material)

L54 ANSWER 5 OF 10 HCA COPYRIGHT 2008 ACS on STN

AN 142:318494 HCA Full-text

TI Fast-drying photocurable inks and method for drying them

IN Sudo, Yasunori; Dewa, Shigeto; Nagase, Kisuke; Ono, Mitsunori

PA Fukushima Prefecture, Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
|      | -----          | ---- | -----    | -----           |          |
| PI   | JP 2005082609  | A    | 20050331 | JP 2003-312595  | 20030904 |
|      | JP 3833202     | B2   | 20061011 |                 |          |
| PRAI | JP 2003-312595 |      | 20030904 |                 |          |

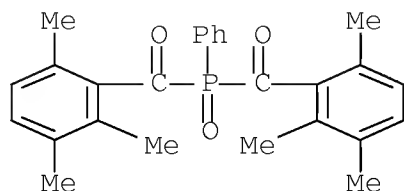
AB The inks comprise (radically) photopolymerizable prepolymers (and monomers) whereto oligomer components in Urushi lacquers are added as thixotropic agents. Phenylbis(2,4,5- trimethylbenzoyl)phosphine oxide (I) may be contained as a photopolymn. initiator in the inks. The inks are fast dried by successive irradiation of visible lights and UV to cure printed parts. Thus, Urushi lacquer contg. 40% urushiol oligomer was mixed with urethane acrylate prepolymer, monomer, and I to give a high-solids ink with viscosity gradient 0.46, which was printed on paper and completely cured by irradiation of 360-nm visible light and then 420-nm UV.

IT 848044-66-6

(photopolymn. initiators; fast drying of photocurable inks contg. Urushi lacquer-derived oligomers as thixotropic agents)

RN 848044-66-6 HCA

CN Phosphine oxide, phenylbis(2,3,6-trimethylbenzoyl)- (CA INDEX NAME)



IC ICM C09D011-10  
 ICS C09D004-00; C09D193-00; C09D201-02  
 CC 42-12 (Coatings, Inks, and Related Products)  
 ST fast drying photocurable ink urushiol laccol oligomer;  
 Urushi lacquer oligomer ink thixotropic agent;  
 polyurethane acrylate ink fast curing visible UV  
 IT Lacquers  
 (Urushi; fast drying of photocurable inks contg. Urushi  
 lacquer-derived oligomers as thixotropic agents)  
 IT Polyurethanes, uses  
 (acrylic; fast drying of photocurable inks contg.  
 Urushi lacquer-derived oligomers as thixotropic agents)  
 IT Thixotropic agents  
 (fast drying of photocurable inks contg. Urushi  
 lacquer-derived oligomers as thixotropic agents)  
 IT Oligomers  
 (fast drying of photocurable inks contg. Urushi  
 lacquer-derived oligomers as thixotropic agents)  
 IT Monomers  
 (fast drying of photocurable inks contg. Urushi  
 lacquer-derived oligomers as thixotropic agents)  
 IT Crosslinking  
 (photochem.; fast drying of photocurable inks contg.  
 Urushi lacquer-derived oligomers as thixotropic agents)  
 IT Inks  
 (photocurable; fast drying of photocurable inks contg.  
 Urushi lacquer-derived oligomers as thixotropic agents)  
 IT Acrylic polymers, uses  
 (polyurethane-; fast drying of photocurable inks contg.  
 Urushi lacquer-derived oligomers as thixotropic agents)  
 IT 53237-59-5, Urushiol 155566-84-0  
 (oligomers, thixotropic agents; fast drying of photocurable  
 inks contg. Urushi lacquer-derived oligomers as  
 thixotropic agents)  
 IT 848044-66-6  
 (photopolymn. initiators; fast drying of photocurable  
 inks contg. Urushi lacquer-derived oligomers as  
 thixotropic agents)

L54 ANSWER 6 OF 10 HCA COPYRIGHT 2008 ACS on STN  
 AN 138:370363 HCA Full-text  
 TI Visible-light curable acrylate coating  
 composition  
 IN Yin, Yingwu; Tan, Haoya; Zhao, Wenchao; Zhong, Zhenlou  
 PA Insight High Technology Co., Ltd., Peop. Rep. China; Zhuhai

Dongcheng Chemical Co. Ltd.  
SO PCT Int. Appl., 15 pp.  
CODEN: PIXXD2

DT Patent  
LA Chinese

FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---|------|----------|-----------------|----------|
|    | -----   | ---- | -----    | -----           |          |
| PI | WO 2003037936   | A1   | 20030508 | WO 2002-CN777   | 20021101 |
|    | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |          |
|    | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
|    | CN 1415679  | A    | 20030507 | CN 2001-134384  | 20011102 |
|    | AU 2002349413   | A1   | 20030512 | AU 2002-349413  | 20021101 |

PRAI CN 2001-134384 A 20011102

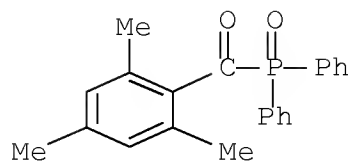
AB A visible-light curable compn., useful as a substitute for currently available UV-light curable products, comprises: (1) 30-75% by wt. of at least one prepolymer contg. olefinic unsatd. group; (2) 20-65% by wt. of at least one monomer contg. olefinic unsatd. group; (3) 0.1-10% by wt. of at least one free-radical type photoinitiator; (4) 0-10% by wt. of at least one coinitiator; (5) 0-20% by wt. of adjuvants. The compn. can be widely used in furniture coating, large-area interior and exterior building paint, as well as photocurable coatings and inks.

IT 75980-60-8, 2,4,6-Trimethylbenzoyl diphenyl phosphine oxide  
84434-11-7 151250-02-1, Bis(2,6-dimethylbenzoyl)-  
2,4,4-trimethylpentylphosphine oxide 162881-26-7,  
Bis(2,4,6-Trimethylbenzoyl) phenyl phosphine oxide  
(visible-light curable acrylate coating  
compn.)

RN 75980-60-8 HCA

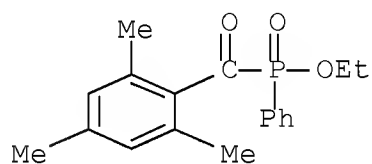
CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX

NAME)



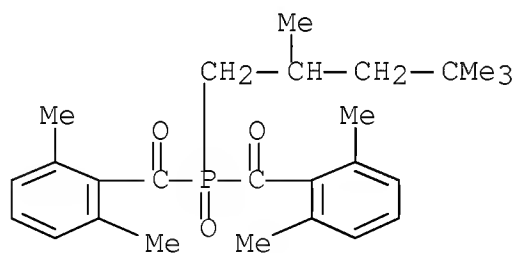
RN 84434-11-7 HCA

CN Phosphinic acid, P-phenyl-P-(2,4,6-trimethylbenzoyl)-, ethyl ester  
(CA INDEX NAME)



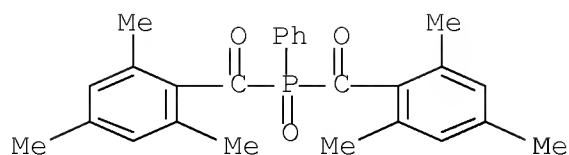
RN 151250-02-1 HCA

CN Phosphine oxide, bis(2,6-dimethylbenzoyl)(2,4,4-trimethylpentyl)-  
(CA INDEX NAME)



RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinyldiene)bis[1-(2,4,6-trimethylphenyl)-  
(CA INDEX NAME)



IC ICM C08F004-00  
 ICS C08L023-00  
 CC 42-7 (Coatings, Inks, and Related Products)  
 IT Polyesters, uses  
     (acrylate-terminated; visible-light curable  
     acrylate coating compn.)  
 IT Epoxy resins, uses  
     Polyethers, uses  
     Polyurethanes, uses  
     (acrylates; visible-light curable acrylate  
     coating compn.)  
 IT Coating materials  
     (photocurable; visible-light curable acrylate  
     coating compn.)  
 IT Coating materials  
     (powder; visible-light curable acrylate  
     coating compn.)  
 IT Polymerization catalysts  
     (radical; visible-light curable acrylate  
     coating compn.)  
 IT Adhesives  
     Inks  
     (visible-light curable acrylate compn.)  
 IT 15625-89-5D, TMPTA, diethylamine or diethylamine ethoxylated deriv.  
     (co-initiator; visible-light curable acrylate  
     coating compn.)  
 IT 102-71-6, Triethanolamine, uses 105-59-9, Diethanolmethylaniline  
     119-53-9D, Benzoin, or ether deriv. 119-61-9, Diphenyl ketone,  
     uses 122-20-3, Triisopropanolamine 134-81-6, Benzil 606-28-0,  
     Methyl-o-benzoylbenzoate 947-19-3, 1-Hydroxycyclohexyl phenyl  
     ketone 5495-84-1 7473-98-5, 2-Hydroxy-2-methyl-1-phenyl-1-  
     propanone 10287-53-3 24650-42-8, 2,2-Dimethoxy-2-  
     phenylacetophenone 58817-05-3 69673-85-4, 1-(4-Isopropylphenyl)-  
     2-hydroxy-2-methyl-1-propanone 71868-10-5, 2-Methyl-1-(4-  
     (methylthio)phenyl)-2-(4-morpholinyl)-1-propanone 75081-21-9,  
     Isopropylthioxanthone 75980-60-8, 2,4,6-Trimethylbenzoyl  
     diphenyl phosphine oxide 76293-13-5, 2,4-Dimethylthioxanthone  
     82799-44-8, 2,4-Diethylthioxanthone 83846-85-9,

4-Benzoyl-4'-methyldiphenylsulfide 84434-11-7  
106797-54-0, 1-(4-(2-Hydroxyethoxy)phenyl)-2-hydroxy-2-methyl-1-propanone 107690-02-8 119313-12-1 151250-02-1,  
Bis(2,6-dimethylbenzoyl)-2,4,4-trimethylpentylphosphine oxide  
162881-26-7, Bis(2,4,6-Trimethylbenzoyl) phenyl phosphine  
oxide 521317-42-0

(visible-light curable acrylate coating  
compn.)

IT 521317-40-8 521317-41-9 522598-92-1  
(visible-light curable acrylate coating  
compn.)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L54 ANSWER 7 OF 10 HCA COPYRIGHT 2008 ACS on STN

AN 131:244630 HCA Full-text

TI Photocuring activity of several commercial, near UV activated  
photoinitiator in clear and pigmented systems

AU Segurola, Juan; Allen, Norman S.; Edge, Michele; Parrondo, Aitor;  
Roberts, Ian

CS Department of Chemistry and Materials, The Manchester Metropolitan  
University, Manchester, M1 5GD, UK

SO Journal of Coatings Technology (1999), 71(894), 61-67  
CODEN: JCTEDL; ISSN: 0361-8773

PB Federation of Societies for Coatings Technology

DT Journal

LA English

AB Photoinitiators have been analyzed by UV spectroscopy to evaluate the  
type of electronic transitions occurring upon absorption of light.  
Photocuring was studied by real time IR spectroscopy (RTIR) in clear  
and pigmented (black, magenta, cyan, and yellow) systems with UV and  
visible light at different photoinitiator concns. in the presence of  
air. Generally, the Type I photofragmenting photoinitiators appear  
to operate more effectively under UV excitation when compared with  
the Type II thioxanthenes, esp. in pigmented systems. There is a  
reasonable correlation between the UV and visible absorption  
properties of the resp. initiators and their overlap with the  
excitation source.

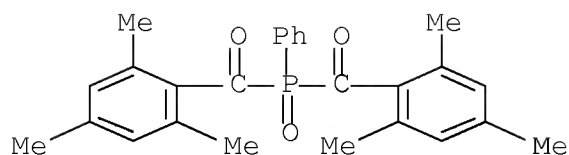
IT 162881-26-7, Irgacure 819

(Irgacure 819; photocuring activity of near UV activated  
photoinitiator in clear and pigmented systems)

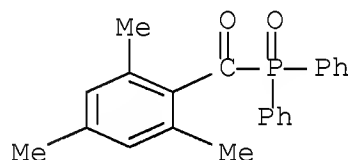
RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)-  
(CA INDEX NAME)]





IT 75980-60-8, Lucirin TPO  
 (Lucirin TPO; photocuring activity of near UV activated  
 photoinitiator in clear and pigmented systems)  
 RN 75980-60-8 HCA  
 CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX  
 NAME)

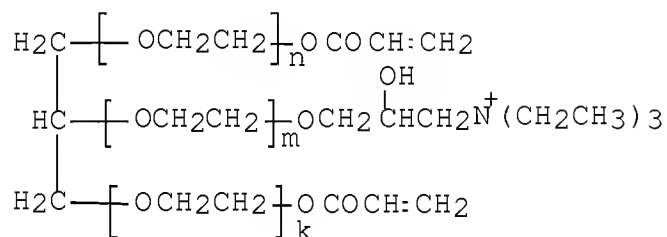


CC 42-12 (Coatings, Inks, and Related Products)  
 ST near UV photoinitiator spectroscopy; electronic transition  
 photoinitiator ink; pigment ink UV crosslinking  
 IT Inks  
 (photocurable; photocuring activity of near UV activated  
 photoinitiator in clear and pigmented systems)  
 IT 162881-26-7, Irgacure 819  
 (Irgacure 819; photocuring activity of near UV activated  
 photoinitiator in clear and pigmented systems)  
 IT 75980-60-8, Lucirin TPO  
 (Lucirin TPO; photocuring activity of near UV activated  
 photoinitiator in clear and pigmented systems)  
 RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT  
 L54 ANSWER 8 OF 10 HCA COPYRIGHT 2008 ACS on STN  
 AN 127:249117 HCA Full-text  
 TI Energy beam-polymerizable compositions, laminates therefrom, and  
 printing process using water-thinned inks  
 IN Noguchi, Hiromichi; Nishioka, Hiroko; Hikuma, Masahiko; Moriya,  
 Kenichi; Katayama, Masato; Tochiwara, Shinichi; Inamoto, Tadayoshi  
 PA Canon K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent  
LA Japanese  
FAN.CNT 1

|      | PATENT NO.<br>-----<br>----- | KIND<br>---- | DATE<br>----- | APPLICATION NO.<br>----- | DATE         |
|------|------------------------------|--------------|---------------|--------------------------|--------------|
| PI   | JP 09208609                  | A            | 19970812      | JP 1996-35767            | 199601<br>31 |
|      | JP 3563859                   | B2           | 20040908      |                          |              |
| PRAI | JP 1996-35767                |              | 19960131      |                          |              |
| GI   |                              |              |               |                          |              |



I

AB The compns., showing solid state at ordinary temp., comprise (A) water-insol. hydrophilic acrylic polymers or acetalized PVA, (B) 2-acryloyl (/mol.)-contg. oligomers, and (C) optional radical initiators, where A/B 100:(25-30) (%) and the acrylic polymers comprise acrylamide (derivs.) 20-60, acrylic acid esters having ethylene glycol sidechains 10-35, and alkyl acrylates 15-40%. Title laminates contain coating layers prepd. by applying the compns. on supports for 3-100  $\mu\text{m}$  and drying. The printing process comprises these steps; forming ink-receiving layers from the compns., printing with water-thinned inks, and exposing with active energy beam to fix pigments in the layers. The printing may be performed by ink-jet printing. Thus, a compn. contg. I lactate (solid) 25, N,N-dimethylaminoacrylamide- Blemmer PE 90-Me methacrylate copolymer 25, and Irgacure 2959 3.0 parts was applied on a PET film and freed of solvents to give an ink-receiving layer, on which a color pattern was printed by jet printing and exposed with UV to give a fixed pattern showing fine resoln., good ink absorbability, and excellent water resistance.

IT 189750-87-6, CGI 1700

(UV-curable compns. contg. acrylic polymers or  
acetalized PVA for printing media with excellent ink  
fixability)

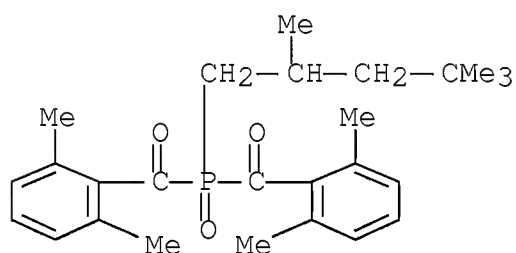
RN 189750-87-6 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with  
bis(2,6-dimethylbenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (9CI)  
(CA INDEX NAME)

CM 1

CRN 151250-02-1

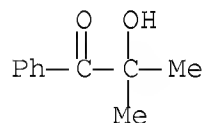
CMF C26 H35 O3 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



IC ICM C08F002-44

ICS B05D005-04; B05D005-06; B32B027-00; B41J002-01; B41M005-00;  
C08F002-46; C08F299-02; D06P005-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 74

ST UV curable ink jet printing layer; acrylamide  
acrylate copolymer ink receiving layer; acetalized PVA  
ink receiving layer printing; water thinned ink  
image fixability printing

IT Ink-jet printing  
 Light-sensitive materials  
 Polymerization catalysts  
 (UV-curable compns. contg. acrylic polymers or  
 acetalized PVA for printing media with excellent ink  
 fixability)

IT Polyvinyl acetals  
 (UV-curable compns. contg. acrylic polymers or  
 acetalized PVA for printing media with excellent ink  
 fixability)

IT 947-19-3, Irgacure 184 2124-31-4, p-Dimethylaminoacetophenone  
 106797-53-9, Irgacure 2959 189750-87-6, CGI 1700  
 (UV-curable compns. contg. acrylic polymers or  
 acetalized PVA for printing media with excellent ink  
 fixability)

IT 178366-09-1 195373-76-3, uses 195373-77-4 195373-79-6  
 195373-80-9 195373-81-0 195373-82-1 195373-83-2 195373-84-3  
 195373-85-4 195385-43-4  
 (UV-curable compns. contg. acrylic polymers or  
 acetalized PVA for printing media with excellent ink  
 fixability)

L54 ANSWER 9 OF 10 HCA COPYRIGHT 2008 ACS on STN

AN 125:197393 HCA Full-text

TI UV-curable resin compositions with lasting UV-absorbing effect and  
 the resin manufacture

IN Ootaki, Chuichi

PA Washin Kagaku Kogyo KK, Japan; Washin Chemical Industry Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|-------------|------|----------|-----------------|----------|
|    | -----       | ---- | -----    | -----           |          |
| PI | JP 08134116 | A    | 19960528 | JP 1994-298906  | 19941107 |

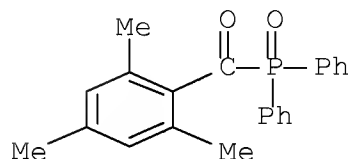
JP 3524600 B2 20040510

PRAI JP 1994-298906 19941107

AB The compns. showing good transparency and no bleeding of UV  
 absorbers, useful for inks, coatings, etc., comprise  
 photopolymerizable polymers and/or monomers, polymeric UV absorbers  
 that absorb UV ray at <380 nm, photoinitiators that operate with  
 visible light or UV at 380-400 nm, and sensitizers. A compn.  
 contained UVA 935LD (benzophenone-type polymeric UV absorber) 15,

polyester acrylate (M 5700) 10, pentaerythritol tetraacrylate 15, PhMe 35, MEK 15, and isopropanol 10 parts.

IT 75980-60-8, Lucirin TPO  
(UV-curable resin compns. contg. lasting polymeric UV absorbers with good transparency)  
RN 75980-60-8 HCA  
CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



IC ICM C08F002-50  
ICS C08J007-00; C08J007-04; C09K003-00  
CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 35  
IT 7473-98-5, Darocur 1173 75980-60-8, Lucirin TPO  
82799-44-8, Kayacure DETX  
(UV-curable resin compns. contg. lasting polymeric UV absorbers with good transparency)

L54 ANSWER 10 OF 10 HCA COPYRIGHT 2008 ACS on STN

AN 111:222172 HCA Full-text

OREF 111:36737a,36740a

TI Multilayer, sheetlike, photosensitive recording material for printing plate production

IN Kurtz, Karl Rudolf; Koch, Horst; Telser, Thomas; Bach, Helmut

PA BASF A.-G., Fed. Rep. Ger.

SO Ger. Offen., 20 pp.

CODEN: GWXXBX

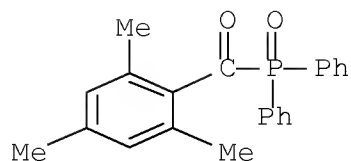
DT Patent

LA German

FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------|------|----------|-----------------|----------|
|    | -----      | ---- | -----    | -----           |          |
| PI | DE 3736980 | A1   | 19890518 | DE 1987-3736980 | 19871031 |
|    | EP 316618  | A2   | 19890524 | EP 1988-117696  | 198810   |

|      |  |    |          |                |
|------|--|----|----------|----------------|
| EP   | 316618   | A3 | 19910320 |                |
| EP   | 316618   | B1 | 19940817 |                |
|      | R: BE, DE, FR, GB, IT, NL, SE  |    |          |                |
| JP   | 01154138   | A  | 19890616 | JP 1988-273378 |
|      |  |    |          | 19881031       |
| US   | 4946758  | A  | 19900807 | US 1988-264893 |
|      |  |    |          | 19881031       |
| US   | 5035981  | A  | 19910730 | US 1990-475802 |
|      |  |    |          | 19900206       |
| PRAI | DE 1987-3736980  | A  | 19871031 |                |
|      | US 1988-264893   | A3 | 19881031 |                |
| OS   | MARPAT 111:222172  |    |          |                |
| AB   | <p>Multilayer, sheetlike, photosensitive recording materials, which can be used for the prodn. of photopolymer letterpress, intaglio, flexog., and relief printing plates, as well as photoresists, contain a relief-forming layer, which upon imagewise exposure with actinic light produces a soly. difference between the exposed and nonexposed regions so that the layer can be developed with org., aq. alc. or aq. alk. liq. media, contg. <math>\geq 1</math> polymer binder 20-98.999, <math>\geq 1</math> photopolymn. initiator 0.001-10, <math>\geq 1</math> binder-compatible component contg. a photopolymerizable olefinic group 1-60, and <math>\geq 1</math> additive that can be used to vary the characteristic profile of the material 0-40 wt.%, a top layer contg. <math>\leq 20\%</math> of <math>\geq 1</math> compd. selected from tertiary amines and amides and/or quaternary ammonium salts, and a strippable top foil. Thus, a PET support was overcoated with a compn. contg. an isoprene-styrene block copolymer, 1,6-hexanediol diacrylate, benzil di-E acetal, a chloro paraffin, an <math>\alpha</math>-methylstyrene-p-methylstyrene oligomer, 2,6-di-tert-butyl-p-cresol, and solvent Black 3 to give a relief-forming layer, a top layer contg. an ethylene-propylene rubber, and N,N-bis(2-hydroxyethyl)-N-stearylamine, and a matte PET top foil. Upon exposure and development of this material, a flexog. plate having a low electrostatic charge and capable of producing a high no. of prints was obtained.</p> |    |          |                |
| IT   | <p>75980-60-8, 2,4,6-Trimethylbenzoyl diphenylphosphine oxide (multilayer photopolymerizable materials contg., for flexog. printing plate prodn.)</p>  |    |          |                |
| RN   | 75980-60-8 HCA   |    |          |                |
| CN   | Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)  |    |          |                |



IC ICM G03F007-10  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST multilayer photopolymer material printing plate; letterpress printing plate photopolymer material; intaglio printing plate photopolymer material; flexog printing plate photopolymer material; relief printing plate photopolymer material; photoresist dry film photopolymer material; dry film photoresist photopolymer material  
 IT 477-73-6, Safranin T 868-77-9 950-56-1 1309-48-4, Magnesium oxide, uses and miscellaneous 1680-21-3 3290-92-4 4197-25-5, Solvent Black 3 6606-59-3, 1,6-Hexanediol dimethacrylate 7631-86-9, Aerosil, uses and miscellaneous 13048-33-4 24650-42-8 25053-13-8, Ultramid 1C 26597-17-1, N-Nitrosocyclohexylhydroxylamine calcium salt 26914-52-3, N-Ethyltoluenesulfonamide 27697-50-3, N-Nitrosocyclohexylhydroxylamine potassium salt 75980-60-8, 2,4,6-Trimethylbenzoyl diphenylphosphine oxide 105729-79-1, Isoprene-styrene block copolymer 109862-35-3  
 (multilayer photopolymerizable materials contg., for flexog. printing plate prodn.)

=> D L55 1-14 BIB ABS HITSTR HITIND

L55 ANSWER 1 OF 14 HCA COPYRIGHT 2008 ACS on STN  
 AN 148:451354 HCA Full-text  
 TI Ink compositions containing unsaturated hyperbranched oligomers and methods of use thereof  
 IN Wilson, Daniel A.; Edison, Sara E.; Madhusoodhanan, Sudhakar; Nagvekar, Devdatt S.; Ellison, Matthew M.  
 PA Hexion Specialty Chemicals, Inc., USA  
 SO U.S. Pat. Appl. Publ., 16pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1  
 PATENT NO. KIND DATE APPLICATION NO. DATE

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PI US 20080090929 A1 20080417 US 2007-974325 200710  
12  
WO 2008048533 A2 20080424 WO 2007-US21970 200710  
12

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,  
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG,  
ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS,  
JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU,  
LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO,  
NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL,  
SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,  
ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK,  
TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,  
TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG,  
ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI US 2006-829431P P 20061013

AB Disclosed herein are rapid radiation curable ink compns. that can  
cure at speeds that are greater than the speeds at which other com.  
available ink compns. cure. The rapidly curing ink compns.  
advantageously display an increased cure speed, improved adhesion and  
solvent resistance when compared with other com. available compns.  
The ink compns. of the invention are substantially free of solvent,  
and include an ethylenically unsatd. hyperbranched oligomer having an  
av. functionality of at least 6 per oligomer, a difunctional  
ethylenically unsatd. compd., and a photoinitiator. The ink compns.  
optionally include a surfactant and/or a vinyl amide monomer.

IT 1019228-51-3, Esacure SM 246  
(photoinitiator; ink compns. contg. unsatd.  
hyperbranched oligomers and methods of use thereof)

RN 1019228-51-3 HCA

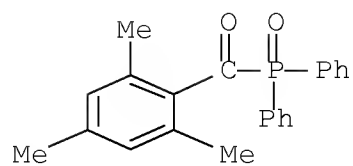
CN INDEX NAME NOT YET ASSIGNED

CM 1

CRN 75980-60-8

CMF C22 H21 O2 P

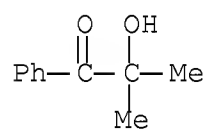




CM 2

CRN 7473-98-5

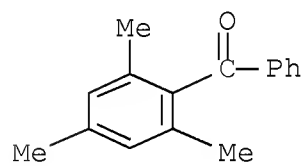
CMF C10 H12 O2



CM 3

CRN 954-16-5

CMF C16 H16 O



CM 4

CRN 115055-18-0

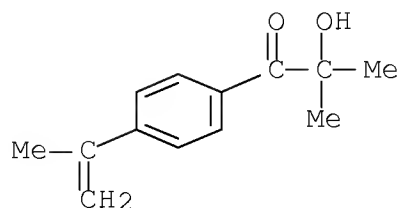
CMF (C13 H16 O2) x

CCI PMS

CM 5

CRN 101649-40-5

CMF C13 H16 O2



INCL 522075000; 522114000; 522116000  
CC 42-12 (Coatings, Inks, and Related Products)  
ST unsatd hyperbranched oligomer photocurable ink  
IT Carbon black, uses  
    (Pigment Black 7; ink compns. contg. unsatd.  
    hyperbranched oligomers and methods of use thereof)  
IT Polyesters, uses  
    (acrylate-terminated, hyperbranched oligomers; ink  
    compns. contg. unsatd. hyperbranched oligomers and methods of use  
    thereof)  
IT Dendrimers  
    (hyperbranched polymers, oligomeric; ink compns. contg.  
    unsatd. hyperbranched oligomers and methods of use thereof)  
IT Coloring materials  
    (ink compns. contg. unsatd. hyperbranched oligomers and  
    methods of use thereof)  
IT Crosslinking catalysts  
    (photochem.; ink compns. contg. unsatd. hyperbranched  
    oligomers and methods of use thereof)  
IT Inks  
    (radiation-curable; ink compns. contg. unsatd.  
    hyperbranched oligomers and methods of use thereof)  
IT 905951-85-1, CN 2302 1019227-73-6  
    (ink compns. contg. unsatd. hyperbranched oligomers and  
    methods of use thereof)  
IT 88-12-0, uses 147-14-8, Pigment Blue 15:3 980-26-7, Pigment Red  
122 2235-00-9, N-Vinyl-caprolactam 3195-78-6,  
N-Vinyl-N-methylacetamide 5202-78-8, N-Vinylacetamide  
13048-33-4, SR 238 13162-05-5, N-Vinyl formamide 77804-81-0,  
Pigment Yellow 180  
    (ink compns. contg. unsatd. hyperbranched oligomers and  
    methods of use thereof)  
IT 75081-21-9, Isopropylthioxanthone 119313-12-1 119344-86-4,  
Irgacure 379 162881-26-7, IRGACURE 819 1019228-51-3,  
Esacure SM 246

(photoinitiator; ink compns. contg. unsatd.  
hyperbranched oligomers and methods of use thereof)

L55 ANSWER 2 OF 14 HCA COPYRIGHT 2008 ACS on STN

AN 147:11515 HCA Full-text

TI Curable overcoat for wax-based inks, ink jet  
printing, and overprint which resists smearing

IN Belelie, Jennifer L.; Odell, Peter G.

PA Xerox Corporation, USA

SO U.S. Pat. Appl. Publ., 9pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

|    | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE         |
|----|----------------|------|----------|-----------------|--------------|
|    | -----          | ---- | -----    | -----           |              |
| PI | US 20070120922 | A1   | 20070531 | US 2005-289552  | 200511<br>30 |

PRAI US 2005-289552 20051130

AB An ink jettable overprint compn. includes  $\geq 1$  of a polymerizable monomer and/or a polymerizable oligomer,  $\geq 1$  photoinitiator, and  $\geq 1$  wax. An example overprint varnish contained SR 9003 16, SR 833S 15, SR 454 8, SR 399 10, EB 4842 additive 40, amine synergist 1, SR 1137 3, Darocur 4265 2, and Unilin 350 (acrylate) 5 parts.

IT 189146-15-4, Darocur 4265  
(in curable overprint for wax-based inks)

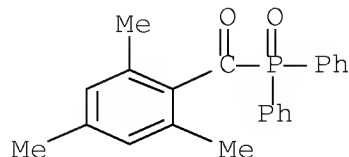
RN 189146-15-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with  
(diphenylphosphinyl) (2,4,6-trimethylphenyl)methanone (CA INDEX  
NAME)

CM 1

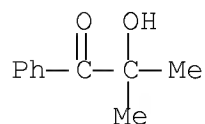
CRN 75980-60-8

CMF C22 H21 O2 P



CM 2

CRN 7473-98-5  
CMF C10 H12 O2



INCL 347100000; 347105000; 347102000; 347101000  
CC 42-12 (Coatings, Inks, and Related Products)  
ST jet printing ink overprint photocurable smear resistance  
IT Ketones, uses  
(amino; in curable overprint for wax-based inks)  
IT Waxes  
(in curable overprint for wax-based inks)  
IT Inks  
(jet-printing; photocurable overprint for wax-based inks  
)  
IT Amines, uses  
(keto; in curable overprint for wax-based inks)  
IT Catalysts  
(photochem.; in curable overprint for wax-based inks)  
IT 937251-71-3P  
(binder; in curable overprint for wax-based inks)  
IT 134-84-9, 4-Methylbenzophenone 954-16-5, 2,4,6-  
Trimethylbenzophenone 5495-84-1 7473-98-5, 2-Hydroxy-2-methyl-1-  
phenylpropan-1-one 75081-21-9, ITX 75980-60-8,  
2,4,6-Trimethylbenzoyldiphenylphosphine oxide 106797-53-9,  
4-(2-Hydroxyethoxy)phenyl(2-hydroxy-2-propyl) ketone 119344-86-4,  
Irgacure 379 139146-15-4, Darocur 4265 752252-69-0,  
SarCure SR 1137 937272-62-3, R-gen BF 1172  
(in curable overprint for wax-based inks)  
IT 937207-49-3P, SR 399-SR 454-SR 833S-SR 9003 copolymer  
(in curable overprint for wax-based inks)  
IT 17832-28-9, 1,4-Butanediol monovinyl ether 28679-16-5  
(in curable overprint for wax-based inks)  
IT 165169-28-8, Unilin 350 474103-87-2, Licomont ER 165  
(in curable overprint for wax-based inks)  
  
L55 ANSWER 3 OF 14 HCA COPYRIGHT 2008 ACS on STN  
AN 143:268432 HCA Full-text

TI Process and materials for producing chemically and physically damage  
 resistant ink-jet printed images on plastic surfaces.  
 IN Figov, Murray; Glass, Boaz; Weiss, Alex  
 PA Creo Il. Ltd., Israel  
 SO U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of Appl. No.  
 PCT/IL03/01072.  
 CODEN: USXXCO

DT Patent  
 LA English

FAN.CNT 2

|    | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE         |
|----|----------------|------|----------|-----------------|--------------|
|    | -----          | ---- | -----    | -----           |              |
| PI | US 20050195260 | A1   | 20050908 | US 2004-3503    | 200412<br>06 |
|    | US 7275818     | B2   | 20071002 |                 |              |
|    | WO 2004069551  | A1   | 20040819 | WO 2003-IL1072  | 200312<br>16 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,  
 CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
 GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,  
 KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
 MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,  
 SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,  
 VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,  
 DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
 SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,  
 MR, NE, SN, TD, TG

PRAI US 2003-444184P P 20030203  
 WO 2003-IL301072 A2 20031216  
 US 2004-534119P P 20040105

AB A method of producing ink-jet printed images with high resistance to  
 phys. and chem. damage on plastic surfaces, comprises coating the  
 plastic object with an ink-jet receptive layer comprising a mixt. of  
 hydrophilic polymers and UV curable pre-polymers deposited from an  
 emulsion, ink-jetting an image onto the coating using ink comprised  
 of a colorant and aq. carrier, warming the printed surface to drive  
 part of the water in the ink into the surface coating and evapg. the  
 other part of the water, UV curing the dried surface and over-coating  
 the UV cured surface with lacquer or with a laminating material.

IT 211431-21-9, Esacure KTO 46

(process and materials for producing chem. and phys. damage  
 resistant ink-jet printed images on plastic surfaces.)

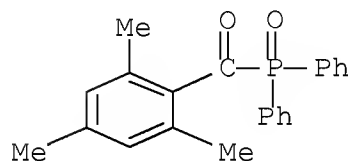
RN 211431-21-9 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer, mixt. with diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, (4-methylphenyl)phenylmethanone and phenyl(2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

CM 1

CRN 75980-60-8

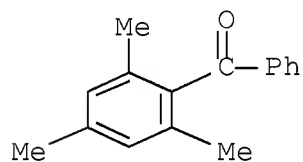
CMF C22 H21 O2 P



CM 2

CRN 954-16-5

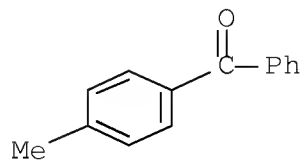
CMF C16 H16 O



CM 3

CRN 134-84-9

CMF C14 H12 O

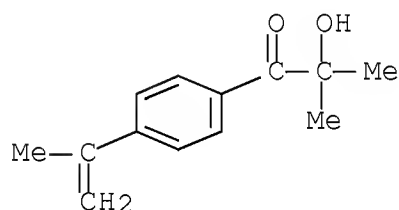


CM 4

CRN 115055-18-0  
CMF (C13 H16 O2)x  
CCI PMS

CM 5

CRN 101649-40-5  
CMF C13 H16 O2



IC ICM B41J002-01

INCL 347102000

CC 42-12 (Coatings, Inks, and Related Products)

ST ink jet UV cure polyurethane emulsion laminate

IT Lacquers

(UV-sensitive pre-photopolymer; process and materials for producing chem. and phys. damage resistant ink-jet printed images on plastic surfaces.)

IT Polyurethanes, uses

(acrylates, UV-curable emulsion; process and materials for producing chem. and phys. damage resistant ink-jet printed images on plastic surfaces.)

IT Coating materials

(emulsion, polyurethane UV curable; process and materials for producing chem. and phys. damage resistant ink-jet printed images on plastic surfaces.)

IT Inks

(jet-printing; process and materials for producing chem. and phys. damage resistant ink-jet printed images on plastic surfaces.)

IT Crosslinking

(photochem.; process and materials for producing chem. and phys. damage resistant ink-jet printed images on plastic

surfaces.)

IT Coating materials  
Inks  
Laminated plastic films  
UV radiation  
(process and materials for producing chem. and phys. damage resistant ink-jet printed images on plastic surfaces.)

IT 191941-15-8, NeoRad R 440  
(UV-cured emulsion; process and materials for producing chem. and phys. damage resistant ink-jet printed images on plastic surfaces.)

IT 211431-21-9, Esacure KTO 46  
(process and materials for producing chem. and phys. damage resistant ink-jet printed images on plastic surfaces.)

L55 ANSWER 4 OF 14 HCA COPYRIGHT 2008 ACS on STN

AN 142:375387 HCA Full-text

TI Photoinitiator blend and photocurable jet-printing ink

IN Schoen, Catherine

PA Jetrion, LLC, USA

SO PCT Int. Appl., 11 pp.  
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| PATENT NO.       | KIND   | DATE     | APPLICATION NO. | DATE     |
|------------------|--|----------|-----------------|----------|
| -----            | ----   | -----    | -----           |          |
| PI WO 2005035670 | A2   | 20050421 | WO 2004-US32192 | 20041001 |
| WO 2005035670    | A3   | 20050909 |                 |          |
| W:               | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |          |                 |          |
| RW:              | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                 |          |
| US 20050148681   | A1   | 20050707 | US 2004-955979  | 20040930 |



PRAI US 2003-508129P P 20031002  
US 2004-955979 A 20040930

AB An ink for jet ink printing comprises a photopolymerizable material, a pigment, and a liq. blend of photoinitiators such as (a) oligo [2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone] (b) 4-methylbenzophenone (c) 2,4,6-trimethylbenzophenone (d) 2,4,6-trimethylbenzoyldiphenylphosphine oxide, (e) phenyl-bis-(2,4,6-trimethylbenzoyl)phosphine oxide, and (f) 2-hydroxy-2-methyl-1-phenylpropanone. The described ink can be cured by either a xenon flash lamp or a mercury vapor lamp, with excellent adhesion over vinyl substrates.

IT 211431-21-9  
(combination of photoinitiators for photopolymerizable jet ink compn. curable by xenon or mercury lamp with excellent adhesion over vinyl surface)

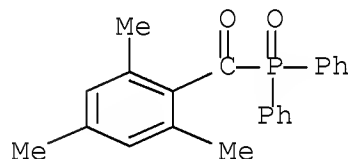
RN 211431-21-9 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer, mixt. with diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, (4-methylphenyl)phenylmethanone and phenyl(2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

CM 1

CRN 75980-60-8

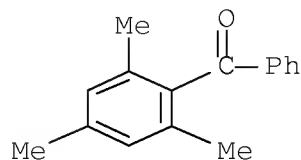
CMF C22 H21 O2 P



CM 2

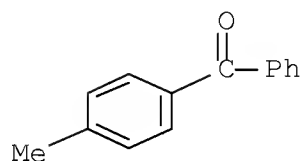
CRN 954-16-5

CMF C16 H16 O



CM 3

CRN 134-84-9  
CMF C14 H12 O

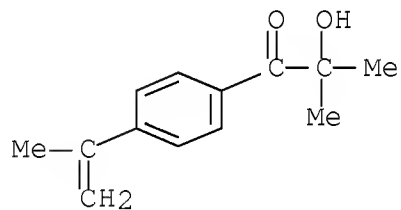


CM 4

CRN 115055-18-0  
CMF (C13 H16 O2) x  
CCI PMS

CM 5

CRN 101649-40-5  
CMF C13 H16 O2



IC ICM C09D  
CC 42-12 (Coatings, Inks, and Related Products)  
ST jet ink compn substituted benzophenone propanone phosphine  
oxide photoinitiator; UV photocurable jet ink vinyl  
surface adhesion  
IT Ink-jet printing  
(combination of photoinitiators for photopolymerizable jet  
ink compn. curable by xenon or mercury lamp with  
excellent adhesion over vinyl surface)

- IT Polyethers, uses  
(di-Me siloxane-, Byk 348; combination of photoinitiators for photopolymerizable jet ink compn. curable by xenon or mercury lamp with excellent adhesion over vinyl surface)
- IT Polysiloxanes, uses  
(di-Me, polyether-, Byk 348; combination of photoinitiators for photopolymerizable jet ink compn. curable by xenon or mercury lamp with excellent adhesion over vinyl surface)
- IT Inks  
(jet-printing; combination of photoinitiators for photopolymerizable jet ink compn. curable by xenon or mercury lamp with excellent adhesion over vinyl surface)
- IT Inks  
(photocurable; combination of photoinitiators for photopolymerizable jet ink compn. curable by xenon or mercury lamp with excellent adhesion over vinyl surface)
- IT 134-84-9, 4-Methylbenzophenone 954-16-5, 2,4,6-Trimethylbenzophenone 7473-98-5, 2-Hydroxy-2-methyl-1-phenylpropanone 75980-60-8, 2,4,6-Trimethylbenzoyldiphenylphosphine oxide 162881-26-7, Phenyl-bis-(2,4,6-trimethylbenzoyl)phosphine oxide 211431-21-9  
(combination of photoinitiators for photopolymerizable jet ink compn. curable by xenon or mercury lamp with excellent adhesion over vinyl surface)
- IT 84170-74-1, Propoxylated neopentyl glycol diacrylate  
(combination of photoinitiators for photopolymerizable jet ink compn. curable by xenon or mercury lamp with excellent adhesion over vinyl surface)
- IT 1330-61-6, Isodecyl acrylate 13048-33-4, 1,6-Hexanediol diacrylate  
(combination of photoinitiators for photopolymerizable jet ink compn. curable by xenon or mercury lamp with excellent adhesion over vinyl surface)
- IT 849016-44-0P  
(cured ink; combination of photoinitiators for photopolymerizable jet ink compn. curable by xenon or mercury lamp with excellent adhesion over vinyl surface)
- IT 115055-18-0, 2-Hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone homopolymer  
(oligomeric; combination of photoinitiators for photopolymerizable jet ink compn. curable by xenon or mercury lamp with excellent adhesion over vinyl surface)

L55 ANSWER 5 OF 14 HCA COPYRIGHT 2008 ACS on STN

AN 142:356710 HCA Full-text

TI Process for the preparation of surface coatings and films

IN Crutchley, Nigel Stuart; Guthrie, James Thomas; Wheeler, Derek Alfred; Lenon, Stephen John

PA Disperse Ltd., UK  
 SO PCT Int. Appl., 32 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|----|---|------|----------|------------------|----------|
|    | -----   | ---- | -----    | -----            |          |
| PI | WO 2005030883   | A1   | 20050407 | WO 2004-GB4064   | 20040923 |
|    | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                  |          |
|    | RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                  |          |
| AU | 2004276053  | A1   | 20050407 | AU 2004-276053   | 20040923 |
| CA | 2539608   | A1   | 20050407 | CA 2004-2539608  | 20040923 |
| EP | 1664211   | A1   | 20060607 | EP 2004-768608   | 20040923 |
|    | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK   |      |          |                  |          |
| CN | 1856555   | A    | 20061101 | CN 2004-80027919 | 20040923 |
| JP | 2007506543  | T    | 20070322 | JP 2006-527471   | 20040923 |
| US | 20070071684   | A1   | 20070329 | US 2006-573380   | 20060324 |
| IN | 2006DN01602   | A    | 20070810 | IN 2006-DN1602   | 20060324 |

PRAI GB 2003-22485 A 20030925  
WO 2004-GB4064 W 20040923

AB A method of coating the surface of a substrate comprises the steps of: (i) contacting the surface with a polymerizable mixt. comprising one or more polymerizable components and contg. suspended droplets of a biliquid foam or of a high internal oil phase emulsion, the said droplets being stabilized by a non-reactive surfactant; and (ii) polyng. the coating to form a polymer comprising the droplets entrapped therein.

IT 189146-15-4, Darocur 4265  
(process for the prepn. of surface coatings and films)

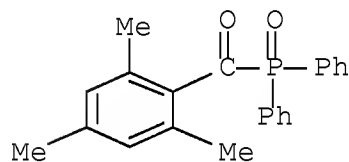
RN 189146-15-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with  
(diphenylphosphinyl)(2,4,6-trimethylphenyl)methanone (CA INDEX  
NAME)

CM 1

CRN 75980-60-8

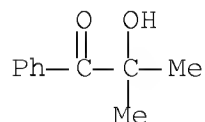
CMF C22 H21 O2 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



IC ICM C09D005-02

ICS C08J005-18

CC 42-2 (Coatings, Inks, and Related Products)

Section cross-reference(s): 63

IT Coating materials  
Coating process  
Gravure printing  
Ink-jet printing  
Lithography  
Screen printing  
(process for the prepn. of surface coatings and films)

IT 3076-04-8, SR489 7473-98-5, Darocur 1173 9005-64-5, Tween 20  
25322-68-3, Polyethyleneglycol 84170-74-1, Actilane421  
178153-95-2, CN 981 189146-15-4, Darocur 4265  
189768-06-7, Ebecryl 2001 380229-92-5, Ebecryl 2002 849099-94-1,  
Craynor CN 9761  
(process for the prepn. of surface coatings and films)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L55 ANSWER 6 OF 14 HCA COPYRIGHT 2008 ACS on STN

AN 141:141866 HCA Full-text

TI Studies of pigmented UV curable systems by real time FTIR

AU Yang, Bo

CS Sartomer Co., USA

SO Experience the World of UV/EB, RadTech 2000: The Premier UV/EB  
Conference & Exhibition, Technical Conference Proceedings,  
Baltimore, MD, United States, Apr. 9-12, 2000 (2000), 271-285  
Publisher: RadTech International North America, Chevy Chase, Md.  
CODEN: 69ETFH

DT Conference

LA English

AB Kinetic curing profiles of UV curable acrylate-based pigmented  
systems were studied by using Real Time FTIR (Fourier Transform IR)  
spectroscopy interfaced with an UV spot curing unit. It was detd.  
that acrylate double bond conversion and induction period are greatly  
affected by the choice of oligomers, photoinitiators, inhibitors, and  
pigments as well as irradiance and spectrum outputs of the UV lamps.  
The preliminary results show that Real Time FTIR provides a simple  
and valuable means of investigating the complicated behavior of the  
UV curing process of pigmented systems.

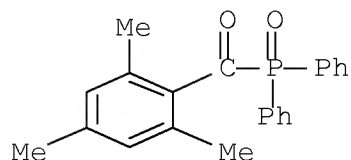
IT 189146-15-4, Darocur 4265  
(polymn. catalyst, photoinitiator; pigmented UV curable systems)

RN 189146-15-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with  
(diphenylphosphinyl)(2,4,6-trimethylphenyl)methanone (CA INDEX  
NAME)

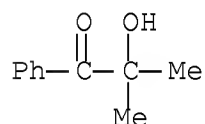
CM 1

CRN 75980-60-8  
CMF C22 H21 O2 P



CM 2

CRN 7473-98-5  
CMF C10 H12 O2



CC 42-7 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 37  
ST acrylate oligomer coating ink photo curing  
IT Inks  
(photocurable; effect of inhibitor on pigmented UV curable systems)  
IT 7473-98-5, Darocur 1173 24650-42-8, Irgacure 651 71868-10-5,  
Irgacure 907 75980-60-8, Lucirin TPO 189146-15-4,  
Darocur 4265  
(polymn. catalyst, photoinitiator; pigmented UV curable systems)  
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT  
  
L55 ANSWER 7 OF 14 HCA COPYRIGHT 2008 ACS on STN  
AN 140:61182 HCA Full-text  
TI Resin-photoinitiator-colorant UV-curable 100% solids inks  
for ink-jet printing  
IN Gloster, Daniel F.; Davis, Alethea C.; Morgan, Michelle S.;  
Anderson, Robert J.; Doll, Paul F.  
PA USA  
SO U.S. Pat. Appl. Publ., 7 pp.

CODEN: USXXCO

DT Patent  
LA English  
FAN.CNT 1

|    | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|----|----------------|------|----------|-----------------|----------|
|    | -----          | ---- | -----    | -----           |          |
| PI | US 20040006157 | A1   | 20040108 | US 2003-423247  | 20030425 |

PRAI US 2002-375678P P 20020426

AB A 100% solids UV-curable ink emits less volatile org. compds. than an org. solvent-based ink because the components of the solids ink are intended to become part of the UV cured product, the inks comprising one or more resins, a photoinitiator (such as Darocur 4265), a carrier medium (such as isooctyl acrylate) and a colorant (such as a dye or pigment). Preferably the resins comprise both highly-functional and low-functional resins, one with high and one with low viscosity. The inks could be suitable for use in a drop-on-demand print system such as with a piezoelec. printer and can be jetted on a substrates and subsequently cured with UV radiation such as in ink-jet printing system with UV lamp attached to the printhead.

IT 189146-15-4, Darocur 4265  
(in inks; resin-photoinitiator-colorant UV-curable 100% solids inks for ink-jet printing)

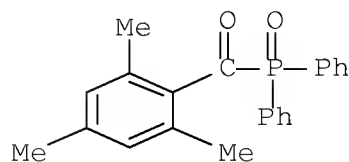
RN 189146-15-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with (diphenylphosphinyl) (2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

CM 1

CRN 75980-60-8

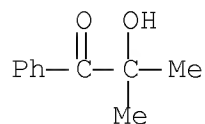
CMF C22 H21 O2 P



CM 2



CRN 7473-98-5  
CMF C10 H12 O2



IC ICM C03C017-00  
ICS C09D005-00  
INCL 523160000; 523161000  
CC 42-12 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 38  
ST resin colorant photoinitiator UV curable solid ink jet  
printing  
IT Coloring materials  
Dyes  
Pigments, nonbiological  
(in inks; resin-photoinitiator-colorant UV-curable 100%  
solids inks for ink-jet printing)  
IT Resins  
(in inks; resin-photoinitiator-colorant UV-curable 100%  
solids inks for ink-jet printing)  
IT Inks  
(printing, UV-curable; resin-photoinitiator-colorant UV-curable  
100% solids inks for ink-jet printing)  
IT Ink-jet printer heads  
(resin-photoinitiator-colorant UV-curable 100% solids  
inks for ink-jet printing)  
IT 75081-21-9, ITX  
(ITX, in inks; resin-photoinitiator-colorant UV-curable  
100% solids inks for ink-jet printing)  
IT 71868-10-5, Irgacure 907 189146-15-4, Darocur 4265  
(in inks; resin-photoinitiator-colorant UV-curable 100%  
solids inks for ink-jet printing)  
IT 118690-08-7, Irgacure 500  
(photoinitiator in inks; resin-photoinitiator-colorant  
UV-curable 100% solids inks for ink-jet  
printing)  
IT 60506-81-2, SR 399  
(resin-photoinitiator-colorant UV-curable 100% solids  
inks for ink-jet printing)  
IT 7328-17-8, 2-(2-Ethoxyethoxy) ethyl acrylate 29590-42-9, Isooctyl  
acrylate

(solvent; resin-photoinitiator-colorant UV-curable 100% solids  
inks for ink-jet printing)

L55 ANSWER 8 OF 14 HCA COPYRIGHT 2008 ACS on STN

AN 139:366463 HCA Full-text

TI Resin compositions for active energy-curable flexographic  
inks

IN Muramatsu, Ichiro; Motomura, Masatoshi

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

|       |      |       |       |  |
|-------|------|-------|-------|--|
| ----- | ---- | ----- | ----- |  |
| ----- |      |       |       |  |

|    |               |   |          |                |
|----|---------------|---|----------|----------------|
| PI | JP 2003321636 | A | 20031114 | JP 2002-128354 |
|----|---------------|---|----------|----------------|

200204

30

PRAI JP 2002-128354 20020430

AB Title compns. contain (A) epoxy ester resins prepd. by reaction of  
epoxy resins with epoxy equiv. of  $\leq 700$  g/equiv and monocarboxylic  
acids and (B)  $\geq 2$  functional (meth)acrylates with A sol. in B. A  
varnish contg. Epiclon 850 hydrogenated rosin ester and Photomer  
4127, which was mixed with more Photomer 4127, Esacure KTO 46, TiO<sub>2</sub>,  
and ditrimethylolpropane tetraacrylate to form an ink showing good  
ink-transfer ability, adhesion, and UV curability.

IT 211431-21-9, Esacure KTO 46

(epoxy resin carboxylate- and poly(meth)acrylate-contg. varnishes  
for UV-curable flexo inks with ink-transfer  
ability and adhesion)

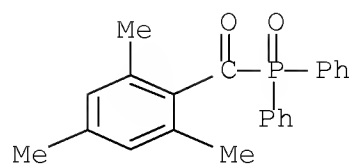
RN 211431-21-9 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-,  
homopolymer, mixt. with diphenyl(2,4,6-trimethylbenzoyl)phosphine  
oxide, (4-methylphenyl)phenylmethanone and phenyl(2,4,6-  
trimethylphenyl)methanone (CA INDEX NAME)

CM 1

CRN 75980-60-8

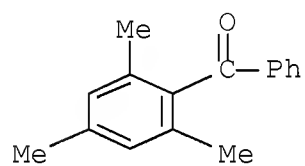
CMF C22 H21 O2 P



CM 2

CRN 954-16-5

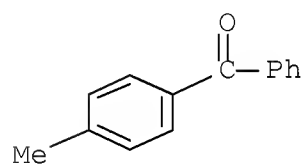
CMF C16 H16 O



CM 3

CRN 134-84-9

CMF C14 H12 O



CM 4

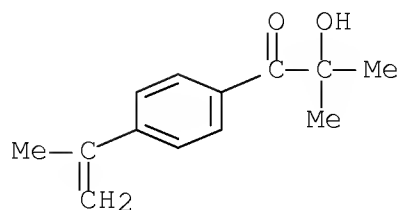
CRN 115055-18-0

CMF (C13 H16 O2) x

CCI PMS

CM 5

CRN 101649-40-5  
CMF C13 H16 O2



- IC ICM C09D011-02  
CC 42-12 (Coatings, Inks, and Related Products)  
ST UV curable flexo ink varnish epoxy resin carboxylate polyacrylate; transfer ability flexo ink varnish epoxy resin carboxylate polyacrylate  
IT Epoxy resins, uses  
(acrylic; epoxy resin carboxylate- and poly(meth)acrylate-contg. varnishes for UV-curable flexo inks with ink-transfer ability and adhesion)  
IT Inks  
(flexog.; epoxy resin carboxylate- and poly(meth)acrylate-contg. varnishes for UV-curable flexo inks with ink-transfer ability and adhesion)  
IT Resin acids  
(hydrogenated, esters, with epoxy resin; epoxy resin carboxylate- and poly(meth)acrylate-contg. varnishes for UV-curable flexo inks with ink-transfer ability and adhesion)  
IT 211431-21-9, Esacure KTO 46  
(epoxy resin carboxylate- and poly(meth)acrylate-contg. varnishes for UV-curable flexo inks with ink-transfer ability and adhesion)  
IT 108-31-6DP, Maleic anhydride, reaction products with epoxy resin rosin esters and polyacrylates 25068-38-6DP, Epiclon 850, esters with hydrogenated resin acid, polymers with polyacrylates 84170-74-1DP, Photomer 4127, polymers with epoxy resin rosin esters and polyacrylates and/or maleic anhydride 94108-97-1DP, Ditrimethylolpropane tetraacrylate, polymers with epoxy resin rosin esters and polyacrylates and/or maleic anhydride  
(epoxy resin carboxylate- and poly(meth)acrylate-contg. varnishes for UV-curable flexo inks with ink-transfer ability and adhesion)

TI UV curable CF ink containing developer  
IN Doll, Gary W.; Mehta, Rajendra  
PA The Standard Register Company, USA  
SO U.S., 3 pp.  
CODEN: USXXAM

DT Patent  
LA English  
FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|----|------------|------|----------|-----------------|----------|
|    | -----      | ---- | -----    | -----           |          |
| PI | US 6620227 | B1   | 20030916 | US 2000-734351  | 20001211 |

PRAI US 2000-734351 20001211

AB A UV curable coated front (CF) ink compn. is formed from a UV curable ink base, an acidic color developer, and a solvent for said acidic color developer; wherein said solvent maintains said acidic color developer in soln. so that it remains dispersed in said ink after curing. The UV curable CF ink compn. may be applied to a substrate inline on a printing press using conventional letterpress or offset techniques without discoloration or smudging of the ink.

IT 189146-15-4, Darocur 4265  
(UV curable CF ink contg. developer)

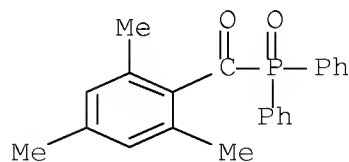
RN 189146-15-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with  
(diphenylphosphinyl) (2,4,6-trimethylphenyl)methanone (CA INDEX  
NAME)

CM 1

CRN 75980-60-8

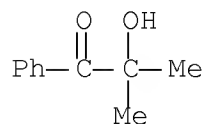
CMF C22 H21 O2 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



IC ICM B41M005-30  
INCL 106031160; 503213000  
CC 42-12 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 74  
ST TGSA acidic color developer UV curable ink  
IT Inks  
(lithog.; UV curable CF ink contg. developer)  
IT Inks  
(printing, UV-curable; UV curable CF ink contg.  
developer)  
IT 51013-18-4, Methyl pyrrolidone  
(UV curable CF ink contg. developer)  
IT 189146-15-4, Darocur 4265 596807-23-7, KC 98-1410UV  
(UV curable CF ink contg. developer)  
IT 80-09-1 41481-66-7, TGSA  
(acidic color developer; UV curable CF ink contg.  
developer)  
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L55 ANSWER 10 OF 14 HCA COPYRIGHT 2008 ACS on STN  
AN 139:102518 HCA Full-text  
TI Differential gloss covering and method for making same  
IN MacQueen, Richard C.; Janini, Thomas E.; Parker, Anthony A.  
PA Congoleum Corp., USA  
SO U.S. Pat. Appl. Publ., 18 pp.  
CODEN: USXXCO  
DT Patent  
LA English  
FAN.CNT 1

|    | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE   |
|----|----------------|------|----------|-----------------|--------|
|    | -----          | ---- | -----    | -----           |        |
| PI | US 20030129369 | A1   | 20030710 | US 2001-962393  | 200109 |
|    |                |      |          |                 | 24     |
|    | US 6759096     | B2   | 20040706 |                 |        |

PRAI US 2001-962393 A3 20010924

AB The differential gloss covering, such as floor covering, comprises a backing substrate, an ink layer, and a cured top layer having a first surface portion with a first gloss and a second surface portion, is made by the process comprising: providing the backing substrate; depositing an ink formulation comprising a curing agent over at least a first area of a top side of the backing substrate to form said ink layer; coating the top side of the backing substrate with a radiation curable formulation to form a top curable layer; diffusing at least a portion of the radiation curing agent into the top curable layer; curing the top curable layer to form the cured top layer and thereby forming a differential gloss covering having said first surface portion above the first area of said top of said backing substrate having the first gloss and the second surface portion having the second gloss that is different from said first gloss. The curing agent is a photoinitiator such as Darocure 1173 (2-hydroxy-2-methyl-1-phenylpropan-1-one) or a photopolymn. inhibitor such as SR 339 (2-phenoxyethyl acrylate).

IT 189146-15-4, Darocur 4265

(photoinitiators; multilayer differential gloss coverings with photoinitiators or photopolymn. inhibitors diffused into radiation curable top layers)

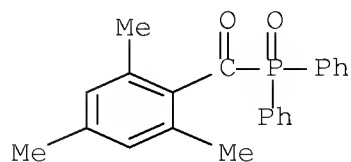
RN 189146-15-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with (diphenylphosphinyl) (2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

CM 1

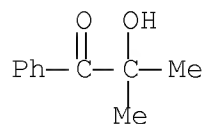
CRN 75980-60-8

CMF C22 H21 O2 P



CM 2

CRN 7473-98-5  
CMF C10 H12 O2



IC ICM B32B007-14  
INCL 428204000  
CC 42-11 (Coatings, Inks, and Related Products)  
IT 947-19-3, Irgacure 184 7473-98-5 24650-42-8, Irgacure 651  
71868-10-5, Irgacure 907 75980-60-8, Lucirin TPO 84434-11-7,  
Lucirin TPO-L 118690-08-7, Irgacure 500 189146-15-4,  
Darocur 4265  
(photoinitiators; multilayer differential gloss coverings with  
photoinitiators or photopolymn. inhibitors diffused into  
radiation curable top layers)

RE.CNT 160 THERE ARE 160 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L55 ANSWER 11 OF 14 HCA COPYRIGHT 2008 ACS on STN  
AN 138:9684 HCA Full-text  
TI Ink-jet recording media and method of preparation  
IN Xing, Linlin; Ho, Cau The  
PA Arkwright, Inc., USA  
SO PCT Int. Appl., 52 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
|    | -----         | ---- | -----    | -----           |          |
| PI | WO 2002094574 | A1   | 20021128 | WO 2002-US16451 | 20020523 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,  
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,  
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,  
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,



CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,  
SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,  
SN, TD, TG

|  |   |          |                |              |
|--|---|----------|----------------|--------------|
| US 20030064201   | A1  | 20030403 | US 2001-863552 | 200105<br>23 |
| US 6610388   | B2  | 20030826 |                |              |
| AU 2002312035  | A1  | 20021203 | AU 2002-312035 | 200205<br>23 |
| EP 1401664   | A1  | 20040331 | EP 2002-739385 | 200205<br>23 |
| EP 1401664   | B1  | 20060301 |                |              |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR |   |          |                |              |
| AT 318716  | T   | 20060315 | AT 2002-739385 | 200205<br>23 |
| ES 2258637   | T3  | 20060901 | ES 2002-739385 | 200205<br>23 |
| US 20040009301   | A1  | 20040115 | US 2003-613198 | 200307<br>03 |
| US 6936308   | B2  | 20050830 |                |              |
| US 20050276929   | A1  | 20051215 | US 2005-179858 | 200507<br>12 |
| US 7166332   | B2  | 20070123 |                |              |
| US 20070009683   | A1  | 20070111 | US 2006-469401 | 200608<br>31 |
| PRAI US 2001-863552  | A   | 20010523 |                |              |
| WO 2002-US16451  | W   | 20020523 |                |              |
| US 2003-613198   | A1  | 20030703 |                |              |
| US 2005-179858   | A1  | 20050712 |                |              |
| AB   | Ink-jet recording media and continuous in-line process for manufg.<br>such media are provided. The media can be printed with ink-jet<br>printers to form images having good color d., brilliance, and resolu.<br>The ink-jet recording media includes a paper substrate coated on one<br>surface with a radiation-curable compn. and an ink-receptive compn.<br>The back surface of the paper may be coated with a polymeric coating<br>to reduce curl and improve dimensional stability. The media have a<br>water vapor transmission rate of $\leq 12$ g / 100 square inches / 24 h<br>and preferably have a surface gloss of $\geq 70$ . |          |                |              |
| IT   | 211431-21-9, Esacure KTO-46   |          |                |              |

(ink-jet recording media contg.)

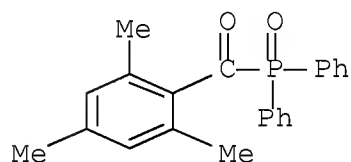
RN 211431-21-9 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer, mixt. with diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, (4-methylphenyl)phenylmethanone and phenyl(2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

CM 1

CRN 75980-60-8

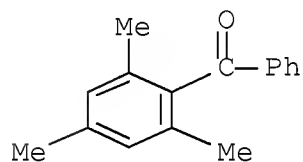
CMF C22 H21 O2 P



CM 2

CRN 954-16-5

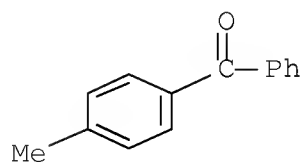
CMF C16 H16 O



CM 3

CRN 134-84-9

CMF C14 H12 O

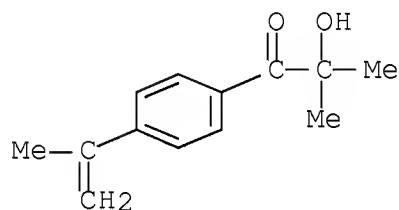


CM 4

CRN 115055-18-0  
CMF (C13 H16 O2)x  
CCI PMS

CM 5

CRN 101649-40-5  
CMF C13 H16 O2



IC ICM B41M005-00  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 38  
ST ink jet recording media resin photoinitiator  
IT Polysiloxanes, uses  
(Drewplus L 407; ink-jet recording media contg.)  
IT Silica gel, uses  
(Gasil UV 70C, Syloid 72; ink-jet recording media  
contg.)  
IT Gelatins, uses  
(Gelita T 7838; ink-jet recording media contg.)  
IT Ink-jet printing  
(ink-jet recording media and method of prepn.)  
IT Coating materials  
(ink-jet recording media contg.)  
IT Polyoxyalkylenes, uses  
Polyurethanes, uses  
(ink-jet recording media contg.)  
IT Butadiene rubber, uses  
(methacrylate-terminated, CN 301; ink-jet recording  
media contg.)

IT 162881-26-7, CGI 819XF  
 (CGI 819XF; ink-jet recording media contg.)

IT 13463-67-7, Titanium dioxide, uses  
 (Kronos 1072; ink-jet recording media contg.)

IT 52408-42-1, Laromer 8765  
 (Laromer 8765; ink-jet recording media contg.)

IT 25805-17-8, Poly(2-ethyl-2-oxazoline)  
 (binder; ink-jet recording media contg.)

IT 9003-17-2  
 (butadiene rubber, methacrylate-terminated, CN 301; ink  
 -jet recording media contg.)

IT 1344-28-1, Dispal 23N4-20, uses  
 (colloidal; ink-jet recording media contg.)

IT 77-92-9, Citric acid, uses 947-19-3, Irgacure 184 9002-85-1,  
 Polyvinylidene chloride 9002-88-4, Lanco PEW 1555 9003-20-7,  
 Polyvinyl acetate 9003-39-8, PVP-K 60 9003-53-6, Polystyrene  
 9004-65-3, Methocel E 15LV 9004-67-5, Methylcellulose 9014-85-1,  
 Surfynol SE-F 15625-89-5, TMPTA-N 25014-41-9, Polyacrylonitrile  
 25037-78-9, Vancryl 610 25322-68-3, Polyox N 80 41556-26-7,  
 Tinuvin 292 42765-17-3, Heloxy Modifier 48 65045-76-3, Haloflex  
 202S 75300-94-6, Rhoplex B-88 111214-41-6, KM 118 159778-06-0,  
 Sancure 815 163442-61-3, Airvol 523S 176521-21-4, Surfynol CT  
 171 204934-18-9, BYK 380 206770-46-9, Witcobond W 213  
 211431-21-9, Esacure KTO-46 220107-59-5, Laromer LR 8981  
 224566-14-7, Syntran HX 31-65 256482-47-0, CN 302 329033-13-8,  
 Laromer PE 44F 335280-34-7, Laromer PO 43F 411225-45-1,  
 Witcobond 213 476614-07-0, Ebecryl 588  
 (ink-jet recording media contg.)

IT 29059-10-7 125954-07-6, Trimethylbenzoyldiphenyl phosphine oxide  
 (photoinitiator; ink-jet recording media contg.)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L55 ANSWER 12 OF 14 HCA COPYRIGHT 2008 ACS on STN

AN 132:309757 HCA Full-text

TI Method of stabilizing a radiation-curable, water-insoluble  
 monomer/prepolymer in an aqueous colloidal suspension, stable  
 emulsion composition and coating therefrom

IN Naisby, Andrew J.

PA Rexam Graphics Inc., USA

SO PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| PATENT NO. | KIND | DATE  | APPLICATION NO. | DATE |
|------------|------|-------|-----------------|------|
| -----      | ---- | ----- | -----           |      |

-----  
PI WO 2000024786 A1 20000504 WO 1998-US22634

199810  
28

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,  
DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS,  
JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG,  
MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,  
SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG,  
KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,  
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9912774 A1 20000515 AU 1999-12774

199810  
28

PRAI WO 1998-US22634 A 19981028

AB The environmentally friendly title method comprises mixing a radiation-curable, water-insol. monomer and/or prepolymer, preferably having ethylenically unsatd. groups such as urethane acrylate or acrylated amine, with an aq. mixt. contg. a colloidal suspension of water-insol. particles such as ethylene-vinyl acetate copolymer, poly(vinyl acetate) or silicone. An aq. emulsion compn. consisting of an aq. phase and nonaq. phase of stable colloidal suspension contg. UV- or electron beam- (EB) curable monomer and/or prepolymer optionally comprises photoinitiator such as  $\alpha$ -hydroxy ketone or phosphine oxide, and preferably a surfactant. The stable mixt. can be used as a coating for various substrates such as paper, textile, wood, ceramic and/or plastic to impart abrasion resistance, as well as in inks, e.g., ink-jet inks. A substrate is coated with the compn., water removed, and cured by UV or EB radiation. Thus, 10 g of mixt. prepd. from 55.10 g Photomer RCC 13-429 (polyester acrylate oligomer), 31.10 g Photomer 3015, 7.70 g RCC 13-361, and 5.50 g Darocur 4265 mixed with 25.0 g Airflex 110, then with 5.0 g water, was coated onto a clear biaxially oriented Melinex 401 polyester film to a wet thickness of 60  $\mu$ , water was removed at 220°, and the coating was cured by UV irradiation (200-250 nm, 1000 mJ/cm<sup>2</sup>). The coating had pencil hardness 6H, adhesion <5% coating removed after scoring with a knife, solvent resistance 75 rubs, and water resistance >100 rubs.

IT 189146-15-4, Darocur 4265

(photoinitiator; stabilizing radiation-curable, water-insol. monomer/prepolymer in aq. colloidal suspension, and coating therefrom)

RN 189146-15-4 HCA

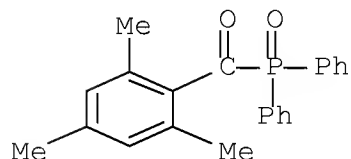
CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with (diphenylphosphinyl) (2,4,6-trimethylphenyl)methanone (CA INDEX

NAME)

CM 1

CRN 75980-60-8

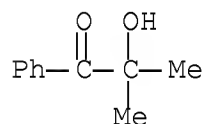
CMF C22 H21 O2 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



IC ICM C08F002-10

ICS C08F002-46

CC 42-3 (Coatings, Inks, and Related Products)

Section cross-reference(s): 35

IT Coating materials

(emulsion; stabilizing radiation-curable, water-insol. monomer/prepolymer in aq. colloidal suspension, coating an ink therefrom)

IT Inks

(jet-printing; stabilizing radiation-curable, water-insol. monomer/prepolymer in aq. colloidal suspension, coating an ink therefrom)

IT 139146-15-4, Darocur 4265

(photoinitiator; stabilizing radiation-curable, water-insol. monomer/prepolymer in aq. colloidal suspension, and coating therefrom)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L55 ANSWER 13 OF 14 HCA COPYRIGHT 2008 ACS on STN

AN 130:82978 HCA Full-text

TI UV-curable emulsion inks with excellent storability and in-machine stability, and stencil printing and multicolor stencil printing apparatus using the same, giving soiling- and ghost-free sharp images

IN Adachi, Hiroshi; Oshima, Koichi; Kawamura, Eiichi

PA Ricoh Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 20 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|----|-------------|------|----------|-----------------|----------|
|    | -----       | ---- | -----    | -----           |          |
| PI | JP 10316919 | A    | 19981202 | JP 1997-143424  | 19970516 |

PRAI JP 1997-143424 19970516

AB The title inks comprise an oil phase and water phase, with addn. of a UV-curable compd. in the oil and/or water phase, and oily thinner with no photochem. reactivity. An ink comprised phthalocyanine blue 6, Ionet S85 8, Plenact A1-M dispersant 0.4, spindle oil 3.6, Ecoracoat 200DA-FA UV-curable resin 60, Darocur 265 2.4, BHT 0.1, water 102, Me p-hydroxybenzoate 0.1, polyacrylic acid 0.67, triethanolamine 0.67, ethylene glycol 16.67 parts.

IT 189146-15-4, Darocur 4265 189750-87-6, CGI 1700  
(UV-curable emulsion inks with excellent storability and in-machine stability, and stencil printing and multicolor stencil printing app. using the same, giving soiling- and ghost-free sharp images)

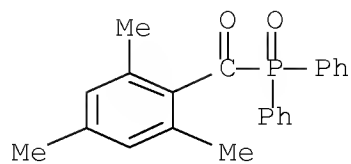
RN 189146-15-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with (diphenylphosphinyl)(2,4,6-trimethylphenyl)methanone (CA INDEX NAME)

CM 1

CRN 75980-60-8

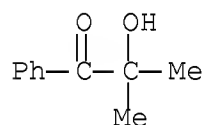
CMF C22 H21 O2 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



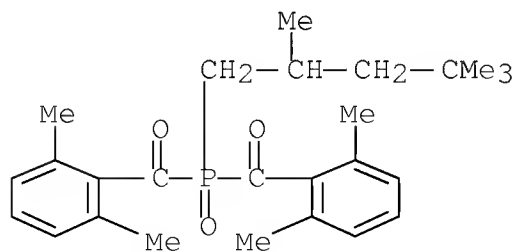
RN 189750-87-6 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with  
bis(2,6-dimethylbenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (9CI)  
(CA INDEX NAME)

CM 1

CRN 151250-02-1

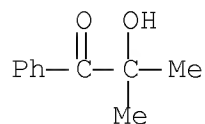
CMF C26 H35 O3 P



CM 2



CRN 7473-98-5  
CMF C10 H12 O2



IC ICM C09D011-02  
ICS B41C001-14; B41L013-04  
CC 42-12 (Coatings, Inks, and Related Products)  
ST photocurable stencil emulsion ink; app stencil printing  
IT Crosslinking catalysts  
(photochem.; UV-curable emulsion inks with excellent storability and in-machine stability, and stencil printing and multicolor stencil printing app. using the same, giving soiling- and ghost-free sharp images)  
IT Inks  
Printing apparatus  
(stencil; UV-curable emulsion inks with excellent storability and in-machine stability, and stencil printing and multicolor stencil printing app. using the same, giving soiling- and ghost-free sharp images)  
IT 947-19-3, Irgacure 184 7473-98-5, Darocur 1173 24650-42-8, Irgacure 651 71868-10-5, Irgacure 907 118690-08-7, Irgacure 500 119313-12-1, Irgacure 369 189146-15-4, Darocur 4265 189750-87-6, CGI 1700  
(UV-curable emulsion inks with excellent storability and in-machine stability, and stencil printing and multicolor stencil printing app. using the same, giving soiling- and ghost-free sharp images)  
IT 159813-92-0, Beam Set AQ 7 218272-62-9, Beam Set AQ 9 218272-65-2, Ecoracoat 200DA-FA  
(UV-curable emulsion inks with excellent storability and in-machine stability, and stencil printing and multicolor stencil printing app. using the same, giving soiling- and ghost-free sharp images)  
L55 ANSWER 14 OF 14 HCA COPYRIGHT 2008 ACS on STN  
AN 128:192780 HCA Full-text  
TI Molecular complexes as photoinitiators  
IN Leppard, David George; James, Thomas Lloyd; Hock, Nils; Kohler, Manfred; Salathe, Ronald  
PA Ciba Specialty Chemicals Holding Inc., Switz.

SO Eur. Pat. Appl., 25 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

|    | PATENT NO.   | KIND | DATE     | APPLICATION NO.  | DATE         |
|----|--|------|----------|------------------|--------------|
|    | -----  | ---- | -----    | -----            |              |
| PI | EP 826692  | A2   | 19980304 | EP 1997-810582   | 199708<br>19 |
|    | EP 826692  | A3   | 19990303 |                  |              |
|    | EP 826692  | B1   | 20030305 |                  |              |
|    | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, SI, LT, LV, FI, RO |      |          |                  |              |
|    | AT 233777  | T    | 20030315 | AT 1997-810582   | 199708<br>19 |
|    | US 5942290   | A    | 19990824 | US 1997-915776   | 199708<br>21 |
|    | AU 9735226   | A    | 19980305 | AU 1997-35226    | 199708<br>22 |
|    | AU 720186  | B2   | 20000525 |                  |              |
|    | RU 2181726   | C2   | 20020427 | RU 1997-114452   | 199708<br>25 |
|    | CA 2213886   | A1   | 19980228 | CA 1997-2213886  | 199708<br>26 |
|    | CA 2213886   | C    | 20051206 |                  |              |
|    | JP 10095788  | A    | 19980414 | JP 1997-244674   | 199708<br>26 |
|    | TW 401439  | B    | 20000811 | TW 1997-86112227 | 199708<br>26 |
|    | NO 9703945   | A    | 19980302 | NO 1997-3945     | 199708<br>27 |
|    | NO 309145  | B1   | 20001218 |                  |              |
|    | ZA 9707692   | A    | 19980302 | ZA 1997-7692     | 199708<br>27 |
|    | CN 1175583   | A    | 19980311 | CN 1997-117698   | 199708       |

CN 1101822 B 20030219  
BR 9704552 A 19980901 BR 1997-4552

199708

28

PRAI CH 1996-2115 A 19960828

AB Mol. complexes formed from addn. of mono-, bis- or trisacylphosphine oxides of formula  $R_1R_2P(O)C(O)R_3$  to  $\alpha$ -hydroxyketone of formula  $4-R_4C_6H_4C(O)CR_5R_6R_7$  wherein  $R_1$  and  $R_2$  are independent of one another and can represent C1-C12 alkyl, benzyl, C1-C8 alkoxy-substituted Ph and  $R_3$  can represent C1-C8 alkyl, alkoxy, alkylthio or halogen-substituted Ph group and  $R_4$  can be H, alkyl, alkoxy or unsatd. alkyl group,  $R_5$  and  $R_6$  can be independently H, alkyl or Ph and  $R_7$  can be OH group. E.g., bis(2,6-dimethoxybenzoyl)-2,4,4-trimethylpentylphosphine oxide was added to  $\alpha$ -hydroxycyclohexyl Ph ketone in 1:1 mol ratio in isooctane/ethyl acetate solvent at  $80^\circ$  to give cryst. complex having mol. formula  $C_{26}H_{35}O_7P \cdot C_{13}H_{16}O_2$ . Application of above complexes are in photopolymn. or as photoinitiator of ethylenic type compds. as well as application in prodn. of lacquers, mimeograph ink, printing plates, dental compd., etc. (one application example of the mol. complex as a component of photo-hardening white lacquer is provided).

IT 174285-64-4P

(prepn. and activity as photoinitiators)

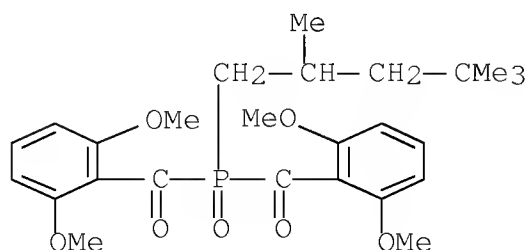
RN 174285-64-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (CA INDEX NAME)

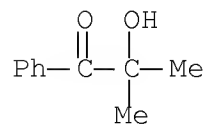
CM 1

CRN 145052-34-2

CMF C26 H35 O7 P



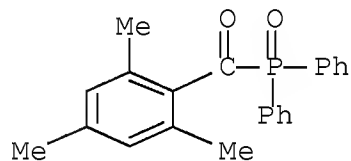
CRN 7473-98-5  
CMF C10 H12 O2



IT 203458-82-6P  
(prepn. as photoinitiators)  
RN 203458-82-6 HCA  
CN Methanone, (1-hydroxycyclohexyl)phenyl-, compd. with  
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (1:1) (CA INDEX  
NAME)

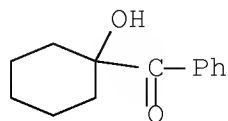
CM 1

CRN 75980-60-8  
CMF C22 H21 O2 P



CM 2

CRN 947-19-3  
CMF C13 H16 O2



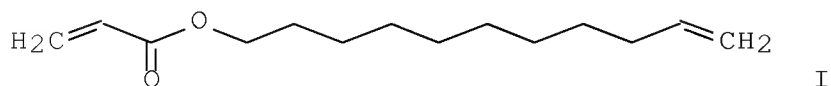
IC ICM C07F009-53

ICS C07C049-82; C07C049-83; G03F007-031  
 CC 29-7 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 42  
 IT 174285-64-4P  
 (prepn. and activity as photoinitiators)  
 IT 184649-96-5P 203458-81-5P 203458-82-6P  
 (prepn. as photoinitiators)

=> D L56 1-35 BIB ABS HITSTR HITIND

L56 ANSWER 1 OF 35 HCA COPYRIGHT 2008 ACS on STN  
 AN 148:357335 HCA Full-text  
 TI Photocurable ink composition for making planographic  
 printing plates  
 IN Nakamura, Ippei; Hayata, Yuuichi  
 PA Fujifilm Corporation, Japan  
 SO Eur. Pat. Appl., 35pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| EP 1900784  | A1   | 20080319 | EP 2007-18104   | 20070914 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,<br>IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI,<br>SK, TR, AL, BA, HR, MK, YU |      |          |                 |          |
| JP 2008095086   | A    | 20080424 | JP 2007-235332  | 20070911 |
| US 20080108747  | A1   | 20080508 | US 2007-898556  | 20070913 |
| PRAI JP 2006-249549   | A    | 20060914 |                 |          |
| JP 2007-235332  | A    | 20070911 |                 |          |
| GI  |      |          |                 |          |

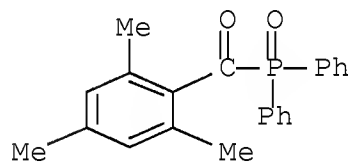


AB A photocurable ink compn. for making planog. printing plates comprises photopolymn. initiators, (meth)acrylate monomers having a double bond with a carbon atom having an sp<sup>3</sup> hybrid orbital at  $\alpha$ -position such as I, other polymerizable compds. and colorants such as dyes or pigments. Thus, a cyan ink compn. is prepd. by mixing 25.0 parts I, 11.0 parts tridecyl acrylates (SR 498E), 23.4 parts 2-phenoxyethyl acrylate (SR 339), 8.0 parts trimethylolpropane acrylate (SR 351), 0.4 part a dispersing agent, 3.6 parts a pigment (Irgalite Blue GLV0), 0.05 part a polymn. inhibitor (Genorad 16), 4.0 parts vinyl ether monomer (Rapi-Cure DVE-3), 8.5 parts a photopolymn. initiator (Lucirin TPO), 4.0 parts benzophenone, 4.0 parts a photopolymn. initiator (Irgacure 184) and 0.05 part a defoamer (BYK 307) and used for printing on PVC sheet at 45° followed by curing with iron-doped UV lamp having power 120 W/cm<sup>2</sup>.

IT 75980-60-8, Lucirin TPO  
(photocurable ink compn. for making planog. printing plates)

RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



CC 41-4 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
Section cross-reference(s): 74

ST photocurable ink planog printing plate methacrylate monomer

IT Monomers  
(meth)acrylate; photocurable ink compn. for making planog. printing plates)

IT Polyethers, uses  
(di-Me siloxane-, defoamer; photocurable ink compn. for making planog. printing plates)

IT Polysiloxanes, uses  
(di-Me, polyether-, defoamer; photocurable ink compn. for making planog. printing plates)

IT Etching  
(in manuf. planog. printing plates; photocurable ink  
compn. for making planog. printing plates)

IT Inks  
(jet-printing, photocurable; photocurable ink compn.  
for making planog. printing plates)

IT Polymerization catalysts  
(photochem., radical; photocurable ink compn.  
for making planog. printing plates)

IT Ink-jet printing  
Pigments, nonbiological  
(photocurable ink compn. for making planog. printing  
plates)

IT Inks  
(photocurable, jet-printing; photocurable ink compn.  
for making planog. printing plates)

IT Carbon black, uses  
(pigment; photocurable ink compn. for making planog.  
printing plates)

IT Printing plates  
(planog., manuf. of; photocurable ink compn. for making  
planog. printing plates)

IT aluminum alloy, base  
(support; photocurable ink compn. for making planog.  
printing plates)

IT 1012339-15-9P 1012339-17-1P 1012339-19-3P 1012339-21-7P  
1012339-24-0P  
(crosslinked binder; photocurable ink compn. for making  
planog. printing plates)

IT 375798-26-8, Solspers 32000  
(dispersing agent; photocurable ink compn. for making  
planog. printing plates)

IT 119-61-9, Benzophenone, uses 947-19-3, Irgacure 184 75081-21-9,  
Isopropylthioxanthone 75980-60-8, Lucirin TPO  
(photocurable ink compn. for making planog. printing  
plates)

IT 147-14-8, Irgalite Blue GLV0) 1047-16-1 872613-79-1, Cromophtal  
Yellow LA  
(photocurable ink compn. for making planog. printing  
plates)

IT 909302-91-6, Genorad 16  
(polymn. inhibitor; photocurable ink compn. for making  
planog. printing plates)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AN 148:339085 HCA Full-text  
 TI Tinted polymeric lenses and methods of manufacture  
 IN Doshi, Praful; Kulkarni, Chidambar L.; Halbe, Stephen D.  
 PA USA  
 SO U.S. Pat. Appl. Publ., 50pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

|    | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|----|----------------|------|----------|-----------------|----------|
|    | -----          | ---- | -----    | -----           |          |
| PI | US 20080062381 | A1   | 20080313 | US 2007-900735  | 20070912 |
|    | WO 2008033481  | A2   | 20080320 | WO 2007-US19965 | 20070912 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI US 2006-844174P P 20060913

AB The present invention recognizes that lenses, such as contact lenses, can be modified and pigmented using an ink that includes oligomers, polymers or polymerizable monomers. The ink can be used to make images on or within the lens, or the ink may be similar to the material of the lens and be precisely deposited on the lens surface to create corrective radius at the exact location on the lens surface. The lens material may also be deposited by an ink-jet printer to create a hybrid lens. Deposition of ink or other material may be digital or analog signal and can be used in a variety of printing methods, including ink-jet printing. Thus, a base ink formulation comprised hydroxyethyl methacrylate (HEMA, monomer), benzoin Me ether (BME, initiator), ethylene glycol dimethacrylate (EGDMA, crosslinker), pigment (any ink or combination of inks to provide a desired color), glycerin (diluent), isopropanol (solvent), titanium oxide (optional second pigment), polyvinyl alc.



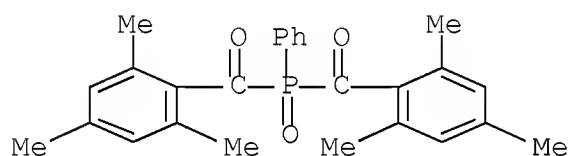
(dispersant), ethylene glycol (humectant), methacrylic acid (comonomer), hydroquinone Me ether (MEHQ, inhibitor), Me propanediol (antikogating agent), and alkylated hydroquinone (antioxidant). The concns. of these constituents were as appropriate for making a lens of desired characteristics and phys. properties.

IT 162881-26-7, Irgacure 819 184649-96-5, Irgacure 1800

(inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)-  
(CA INDEX NAME)



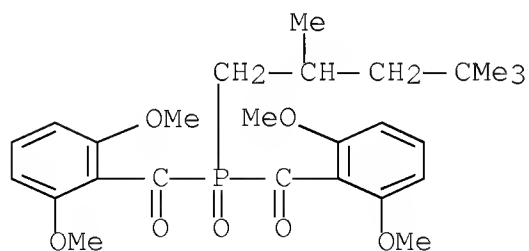
RN 184649-96-5 HCA

CN Methanone, (1-hydroxycyclohexyl)phenyl-, mixt. with  
bis(2,6-dimethoxybenzoyl) (2,4,4-trimethylpentyl)phosphine oxide (CA  
INDEX NAME)

CM 1

CRN 145052-34-2

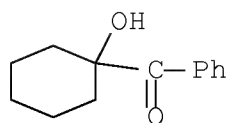
CMF C26 H35 O7 P



CM 2

CRN 947-19-3

CMF C13 H16 O2



INCL 351161000; 347102000; 351160000H; 351162000; 351177000  
 CC 63-7 (Pharmaceuticals)  
 Section cross-reference(s): 42  
 ST monomer oligomer polymer ink jet printing tinted contact  
 lens  
 IT Aromatic hydrocarbons, biological studies  
 (C9-11, Sures-Sol 150ND; inks comprising oligomers,  
 polymers or polymerizable monomers for jet printing in manufg. of  
 tinted lenses)  
 IT Polysiloxanes, biological studies  
 (acrylic-polyether-, BYK UV 3500; inks  
 comprising oligomers, polymers or polymerizable monomers for jet  
 printing in manufg. of tinted lenses)  
 IT Polyethers, biological studies  
 (acrylic-polysiloxane-, BYK UV 3500; inks  
 comprising oligomers, polymers or polymerizable monomers for jet  
 printing in manufg. of tinted lenses)  
 IT Contact lenses  
 (hard; inks comprising oligomers, polymers or  
 polymerizable monomers for jet printing in manufg. of tinted  
 lenses)  
 IT Antifriction materials  
 Antioxidants  
 Biosensors  
 Coating materials  
 Contact lenses  
 Drugs  
 Hydrogels  
 Ink-jet printing  
 Lenses  
 Reactive dyes  
 Thermal printing  
 (inks comprising oligomers, polymers or polymerizable  
 monomers for jet printing in manufg. of tinted lenses)  
 IT Polyoxyalkylenes, biological studies  
 (inks comprising oligomers, polymers or polymerizable  
 monomers for jet printing in manufg. of tinted lenses)  
 IT Oligomers

(inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT Monomers  
(inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT Inks  
(jet-printing, TD 103A, TD 103, TD 46, TD 47, TD 92, TD 106; inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT Crosslinking  
(photochem.; inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT Polymerization  
(radical; inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT Contact lenses  
(soft; inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT Crosslinking  
(thermal; inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT 868-77-9  
(BX-HEMA LL T; inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT 2163-42-0  
(Methylpropanediol; inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT 78-67-1, Vazo-64 123-31-9D, Hydroquinone, alkylated 150-76-5, Hydroquinone methyl ether 3524-62-7, Benzoin methyl ether 162881-26-7, Irgacure 819 184649-96-5, Irgacure 1800  
(inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT 9002-89-5, Polyvinyl alcohol 9014-85-1, Surfynol 465 25068-38-6, Epon 2004 25322-68-3, Polyethylene glycol 26570-48-9, Polyethylene glycol diacrylate 169117-72-0, Dynol 604 175801-05-5, Surfynol 504  
(inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT 79-41-4, Methacrylic acid, biological studies 97-90-5, Ethylene glycol dimethacrylate 2370-63-0, Ethoxyethyl methacrylate

54174-14-0, Glycerol methacrylate

(inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT 56-81-5, Glycerine, biological studies 67-63-0, Isopropanol, biological studies 94-36-0, Benzoyl peroxide, biological studies 107-21-1, Ethylene glycol, biological studies 112-07-2, EB Acetate 121-44-8, Triethylamine, biological studies 504-63-2, 1,3-Propanediol 616-45-5, 2-Pyrrolidone 828-00-2, Giv-Gard DXN 2634-33-5, Proxel GXL 7529-22-8, 4-Methylmorpholine N-oxide 9003-39-8, Polyvinylpyrrolidone 12226-47-0, Reactive Yellow 15 12236-86-1, Reactive Blue 21 13463-67-7, Titanium oxide, biological studies 17095-24-8, Reactive Black 5 64265-57-2, Ionac PFAZ 322 84540-57-8, PM acetate 98114-32-0, Reactive Red 180 175893-71-7, ViviPrint 121 206367-02-4, Surfynol CT 121 216098-99-6, Versene 100XL 1011528-53-2, X 6985-185 1011529-56-8, Papicel Blue IJ-PG

(inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

IT 1011270-16-8P

(prepolymer; inks comprising oligomers, polymers or polymerizable monomers for jet printing in manufg. of tinted lenses)

L56 ANSWER 3 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 148:145568 HCA Full-text

TI Water-based concentrated product forms of photoinitiators made by a heterophase polymerization technique

IN Schellenberg, Carsten; Auschra, Clemens; Peter, Wolfgang; Pirrung, Frank Oliver Heinrich; Tanabe, Junichi

PA Ciba Specialty Chemicals Holding Inc., Switz.

SO PCT Int. Appl., 51pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
|    | -----         | ---- | -----    | -----           |          |
| PI | WO 2008003601 | A1   | 20080110 | WO 2007-EP56290 | 20070625 |

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SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,  
ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK,  
TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,  
TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG,  
ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRAI EP 2006-116586 A 20060704

AB The invention relates to a concd. aq. polymer dispersion with an av. particle size of less than 1000 nm comprising (a) a polymer carrier prep'd. by heterophase radical polymn. of at least one ethylenically unsat'd. monomer in the presence of (b) a photoinitiator and / or photolatent catalyst and (c) optionally a non-ionic, cationic or anionic surfactant, wherein the wt. ratio of the photoinitiator and / or photolatent catalyst to the polymer carrier is greater than 20 parts of photoinitiator and / or photolatent catalyst per 100 parts of polymer carrier, preferably equal or greater than 35 parts of photoinitiator and / or photolatent catalyst per 100 parts of polymer carrier.

IT 1001396-32-2, Irgacure 2100  
(Irgacure 2100; water-based concd. product forms of photoinitiators made by a heterophase polymn. technique)

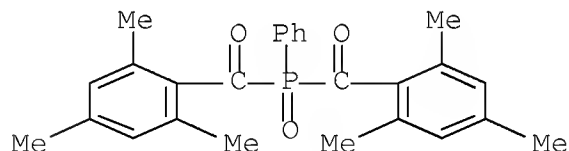
RN 1001396-32-2 HCA

CN Phosphinic acid, P-phenyl-P-(2,4,6-trimethylbenzoyl)-, ethyl ester, mixt. with 1,1'-(phenylphosphinyldiene)bis[1-(2,4,6-trimethylphenyl)methanone] (CA INDEX NAME)

CM 1

CRN 162881-26-7

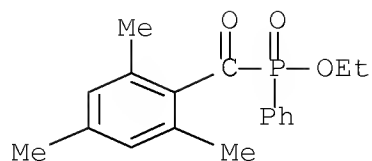
CMF C26 H27 O3 P



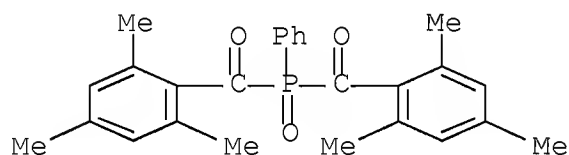
CM 2

CRN 84434-11-7

CMF C18 H21 O3 P



IT 162881-26-7, Irgacure 819  
 (water-based concd. product forms of photoinitiators made by a  
 heterophase polymn. technique)  
 RN 162881-26-7 HCA  
 CN Methanone, 1,1'-(phenylphosphinyldiene)bis[1-(2,4,6-trimethylphenyl)-  
 (CA INDEX NAME)]



CC 37-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 42  
 IT Polymerization  
 (radical, heterophase; water-based concd. product forms  
 of photoinitiators made by a heterophase polymn. technique)  
 IT Adhesives  
 Coating materials  
 Electrical materials  
 Inks  
 (water-based concd. product forms of photoinitiators made by a  
 heterophase polymn. technique)  
 IT Coating materials  
 (water-thinned, clear UV curable; water-based concd.  
 product forms of photoinitiators made by a heterophase polymn.  
 technique)  
 IT 1001396-32-2, Irgacure 2100  
 (Irgacure 2100; water-based concd. product forms of  
 photoinitiators made by a heterophase polymn. technique)  
 IT 947-19-3, Irgacure 184 7473-98-5 15206-55-0, Darocur MBF  
 118690-08-7, Irgacure 500 162881-26-7, Irgacure 819  
 170738-46-2 894419-22-8, Irgacure 754  
 (water-based concd. product forms of photoinitiators made by a  
 heterophase polymn. technique)

L56 ANSWER 4 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 148:80771 HCA Full-text

TI Ink-jet ink composition

IN Nakamura, Ippei

PA Fujifilm Corporation, Japan

SO U.S. Pat. Appl. Publ., 20pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

|    | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|----|----------------|------|----------|-----------------|----------|
|    | -----          | ---- | -----    | -----           |          |
| PI | US 20070291080 | A1   | 20071220 | US 2007-808653  | 20070612 |
|    | JP 2007332300  | A    | 20071227 | JP 2006-167159  | 20060616 |

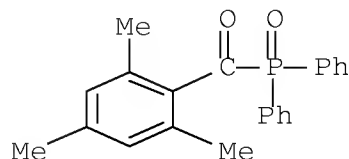
PRAI JP 2006-167159 A 20060616

AB The present invention relates to an ink-jet ink compn., comprising (A) a polybutadiene; (B) a radical polymerizable compd. having a (meth)acryloyl group; (C) a radical polymn. initiator; and (D) a colorant. The ink compn. is highly sensitive to activated radiant rays and can accordingly be cured in a high sensitivity when irradiated with the same, can maintain its flexibility even after the cure thereof and can accordingly be used suitably in the ink-jet recording method and a method for the prepn. of a lithog. printing plate, to thus form printed matters and a lithog. printing plate having high printing durability.

IT 75980-60-8, Lucirin TPO  
(UV curable ink-jet ink compn. used  
in ink-jet recording method and method for prepn. of  
lithog. printing plate)

RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



INCL 347052000; 522149000

CC 42-12 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 37, 74

ST UV curable inkjet polybutadiene acrylic polymer  
 ink lithog plate

IT Carbon black, uses  
 (Microlith Black C-K; UV curable ink-jet  
 ink compn. used in ink-jet recording method and  
 method for prepn. of lithog. printing plate)

IT Lithographic plates  
 Pigments, nonbiological  
 (UV curable ink-jet ink compn. used  
 in ink-jet recording method and method for prepn. of  
 lithog. printing plate)

IT Alloys, uses  
 (aluminum; UV curable ink-jet ink  
 compn. used in ink-jet recording method and method for  
 prepn. of lithog. printing plate)

IT Inks  
 (jet-printing; UV curable ink-jet ink  
 compn. used in ink-jet recording method and method for  
 prepn. of lithog. printing plate)

IT Butadiene rubber, uses  
 (of 1,2-configuration, NISSO-PB B 1000; UV curable  
 ink-jet ink compn. used in ink-jet  
 recording method and method for prepn. of lithog. printing plate)

IT Polymerization catalysts  
 (radical; UV curable ink-jet  
 ink compn. used in ink-jet recording method and  
 method for prepn. of lithog. printing plate)

IT 119-61-9, Benzophenone, uses 947-19-3, Irgacure 184  
 75980-60-8, Lucirin TPO  
 (UV curable ink-jet ink compn. used  
 in ink-jet recording method and method for prepn. of  
 lithog. printing plate)

IT 960293-78-1P, Actilane 421-2-Phenoxyethyl acrylate-Rapi-Cure  
 DVE-3-SR 498D copolymer  
 (UV curable ink-jet ink compn. used  
 in ink-jet recording method and method for prepn. of  
 lithog. printing plate)

IT 9002-86-2, Polyvinyl chloride  
 (UV curable ink-jet ink compn. used  
 in ink-jet recording method and method for prepn. of  
 lithog. printing plate)

IT 147-14-8, Irgalite Blue GLVO 1047-16-1 872613-79-1, Cromophtal  
 Yellow LA



(UV curable ink-jet ink compn. used  
in ink-jet recording method and method for prepn. of  
lithog. printing plate)

IT 9003-17-2D, of 1,2-configuration  
(butadiene rubber, NISSO-PB B 1000; UV curable  
ink-jet ink compn. used in ink-jet  
recording method and method for prepn. of lithog. printing plate)

IT 375798-26-8, Solsperse 32000  
(dispersant; UV curable ink-jet ink  
compn. used in ink-jet recording method and method for  
prepn. of lithog. printing plate)

IT 909302-91-6, Genorad 16  
(polymn.-inhibiting agent; UV curable ink-jet  
ink compn. used in ink-jet recording method and  
method for prepn. of lithog. printing plate)

L56 ANSWER 5 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 148:42580 HCA Full-text

TI Method and photosensitive material for manufacturing black-matrix  
retaining wall for color filters

IN Chen, Wei Yuen

PA Xiamen Hometron Technology Co., Ltd., Taiwan

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 10pp.

CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

|    | PATENT NO.   | KIND | DATE     | APPLICATION NO.  | DATE         |
|----|--------------|------|----------|------------------|--------------|
|    | -----        | ---- | -----    | -----            |              |
| PI | CN 101071269 | A    | 20071114 | CN 2006-10075800 | 200605<br>09 |

PRAI CN 2006-10075800 20060509

AB The title photosensitive material comprises (by wt.%): pigment 0.1-40, solvent 1-95, initiator 0.01-15, high-mol.-wt. oligomer or modified substance 0.1-30, high-mol.-wt. polymer  $\leq$  30, and additive  $\leq$  10. The contact angle between the obtained black-matrix retaining wall and color ink is increased. The photosensitive material can prevent color inks from adsorbing, moistening or mixing on the black-matrix retaining wall.

IT 174285-64-4, Irgacure 1700  
(manuf. of black-matrix retaining wall for color filters)

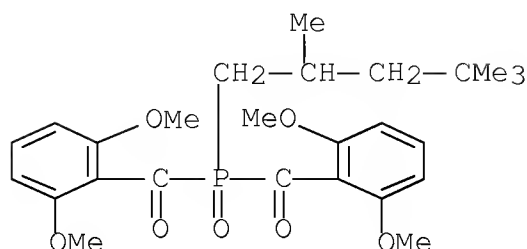
RN 174285-64-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with  
bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (CA  
INDEX NAME)

CM 1

CRN 145052-34-2

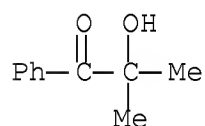
CMF C26 H35 O7 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 86-39-5, Kayacure CTX 90-93-7, 4,4'-Bis(diethylamino)benzophenone 90-94-8, 4,4'-Bis(dimethylamino)benzophenone 119-61-9, Darocur BP, uses 947-19-3, Irgacure 184 6542-67-2, Tris(trichloromethyl)-s-triazine 7473-98-5, Darocur 1173 24650-42-8, Irgacure 651 71868-10-5, Irgacure 907 75980-60-8, Chivacure TPO 82799-44-8, Kayacure DETX-S 83846-85-9, Kayacure BMS 106797-53-9, Irgacure 2959 118690-08-7, Irgacure 500 119313-12-1, Irgacure 369 119344-86-4, Irgacure 379 125051-32-3, Irgacure 784 130285-49-3 162881-26-7, Irgacure 819 174285-64-4, Irgacure 1700 184649-96-5, Irgacure 1800 253585-83-0, Irgacure OXE 01 344562-80-7, Irgacure 250 445491-59-8, Irgacure 1000 478556-66-0, CGI 242 847557-39-5, Irgacure OXE 02 958244-68-3, Chivacure 284 959609-17-7, Chivacure TPO-L 959609-26-8, Chivacure 200 959609-27-9, Chivacure 107 (manuf. of black-matrix retaining wall for color filters)

L56 ANSWER 6 OF 35 HCA COPYRIGHT 2008 ACS on STN  
 AN 147:429003 HCA Full-text  
 TI Ink compositions, ink-jet recording methods and  
 process for producing lithographic printing plates  
 IN Hayata, Yuuichi  
 PA Fujifilm Corporation, Japan  
 SO Eur. Pat. Appl., 60pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 1

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|---|------|----------|-----------------|--------------|
| -----   | ---- | -----    | -----           |              |
| PI EP 1840176   | A1   | 20071003 | EP 2007-6248    | 200703<br>27 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,<br>IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI,<br>SK, TR, AL, BA, HR, MK, YU |      |          |                 |              |
| JP 2007262178   | A    | 20071011 | JP 2006-87116   | 200603<br>28 |
| US 20070232722  | A1   | 20071004 | US 2007-727524  | 200703<br>27 |

PRAI JP 2006-87116 A 20060328  
 AB An ink compn. comprises an N-vinyllactam, a (meth)acrylic acid ester and/or amide having at least 3 alkylene oxide groups per mol., and a polymn. initiator, the content of the N-vinyllactam being at least 10% of the ink total wt. An ink -jet recording method comprises a step of discharging the ink compn. onto a recording medium, and a step of curing the ink compn. by irradiating the discharged ink compn. with actinic radiation. A process for producing a lithog. printing plate comprises a step of discharging the ink compn. onto a hydrophilic support, and a step of curing the ink compn. by irradiating the discharged ink compn. with actinic radiation so as to form a hydrophobic image on the hydrophilic support by curing the ink compn. Thus, a cyan base was prepd. by mixing Irgalite Blue GLVO pigment (300), propoxylated neopentyl glycol diacrylate Actilane 421 (500), and Solsperse 32000 dispersant (200 parts). An ink compn. having a viscosity of 22 mPa.s and excellent UV curability was obtained by mixing the cyan base (6.0), N-vinyl-ε- caprolactam (25), methoxytriethylene glycol acrylate NK ester AM 30G (21.9), Actilane 421 (15), triethylene glycol divinyl ether Rapi-Cure DVE 3 (9.5), acrylate-modified polyester Ebecryl 657 (657), (2,4,6-

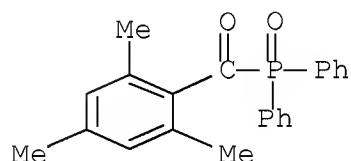
trimethylbenzoyl)diphenylphosphine oxide Lucirin TPO (8.5), benzophenone (3.0), 1-hydroxycyclohexyl Ph ketone Irgacure 184 (2.0), surfactant BYK 307 (0.05), and polymn. inhibitor Firstcure ST 1 (0.05 parts).

IT 75980-60-8, Lucirin TPO

(ink compns., ink-jet recording methods and process for producing lithog. printing plates)

RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



CC 42-12 (Coatings, Inks, and Related Products)

ST vinyl lactam polyoxyalkylene acrylate ink compn  
inkjet printing lithog plate

IT Carbon black, uses

(Special Black 250; ink compns., ink-jet recording methods and process for producing lithog. printing plates)

IT Polyoxyalkylenes, uses

(acrylic-polyester-polyether-; ink compns., ink-jet recording methods and process for producing lithog. printing plates)

IT Polyethers, uses

(acrylic-polyester-polyoxyalkylene-; ink compns., ink-jet recording methods and process for producing lithog. printing plates)

IT Polyesters, uses

(acrylic-polyether-polyoxyalkylene-; ink compns., ink-jet recording methods and process for producing lithog. printing plates)

IT Lithographic plates

(ink compns., ink-jet recording methods and process for prodn. of)

IT Ink-jet printing

(ink compns., ink-jet recording methods and process for producing lithog. printing plates)

IT Polyesters, miscellaneous

(ink compns., ink-jet recording methods and

process for producing lithog. printing plates)

IT Inks  
 (jet-printing; ink compns., ink-jet recording methods and process for producing lithog. printing plates)

IT Polymerization catalysts  
 (photochem., radical; ink compns., ink-jet recording methods and process for producing lithog. printing plates)

IT Paper  
 (printing, recording medium support; ink compns., ink-jet recording methods and process for producing lithog. printing plates)

IT Polyolefins  
 (recording medium support; ink compns., ink-jet recording methods and process for producing lithog. printing plates)

IT 119-61-9, Benzophenone, uses 947-19-3, Irgacure 184  
 75980-60-8, Lucirin TPO  
 (ink compns., ink-jet recording methods and process for producing lithog. printing plates)

IT 951288-97-4P, Actilane 421-Ebecryl 657-NK ester AM  
 30G-N-vinyl- $\epsilon$ -caprolactam-Rapi-Cure DVE 3 copolymer  
 951288-98-5P, Actilane 421-Ebecryl 657-NK ester AM  
 90G-N-vinyl- $\epsilon$ -caprolactam-Rapi-Cure DVE 3 copolymer  
 951288-99-6P, Actilane 421-Ebecryl 657-N-vinyl- $\epsilon$ -caprolactam-polyethylene glycol monoacrylate-Rapi-Cure DVE 3 copolymer  
 951289-01-3P 951289-02-4P, Actilane 421-Ebecryl 657-NK ester A  
 400-N-vinyl- $\epsilon$ -caprolactam-Rapi-Cure DVE 3 copolymer  
 951289-03-5P, Actilane 421-Ebecryl 657-NK ester A-BPE  
 4-N-vinyl- $\epsilon$ -caprolactam-Rapi-Cure DVE 3 copolymer  
 951289-04-6P, Actilane 421-Ebecryl 657-N-vinyl- $\epsilon$ -caprolactam-PTMGA 250-Rapi-Cure DVE 3 copolymer 951289-05-7P, Actilane 421-Ebecryl 657-NK ester A-TMPT 3EO-N-vinyl- $\epsilon$ -caprolactam-Rapi-Cure DVE 3 copolymer 951289-06-8P, Actilane 421-Ebecryl 657-NK ester ATM 35E-N-vinyl- $\epsilon$ -caprolactam-Rapi-Cure DVE 3 copolymer 951379-48-9P, Actilane 421-Ebecryl 657-NK Ester A-TMPT 3PO-N-vinyl- $\epsilon$ -caprolactam-Rapi-Cure DVE 3 copolymer  
 (ink compns., ink-jet recording methods and process for producing lithog. printing plates)

IT 147-14-8, Irgalite Blue GLVO 29920-31-8, Novoperm Yellow H 2G  
 951389-53-0, Cinquasia Magenta RT 335D  
 (ink compns., ink-jet recording methods and process for producing lithog. printing plates)

IT 25704-18-1, Poly(sodium p-styrenesulfonate)  
 (ink-receiving layer on lithog. plate; ink compns., ink-jet recording methods and process for

producing lithog. printing plates)  
 IT 25038-59-9, miscellaneous  
 (recording medium support; ink compns., ink  
 -jet recording methods and process for producing lithog. printing  
 plates)

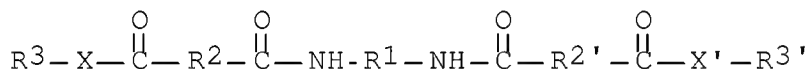
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 7 OF 35 HCA COPYRIGHT 2008 ACS on STN  
 AN 147:32884 HCA Full-text  
 TI UV-curable phase change inks containing  
 photoinitiator with phase change properties and gellant affinity  
 IN Odell, Peter G.; Toma, Eniko; Belelie, Jennifer L.  
 PA Xerox Corp., USA  
 SO U.S. Pat. Appl. Publ., 48pp.  
 CODEN: USXXCO

DT Patent  
 LA English

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
|      | -----          | ---- | -----    | -----           |          |
| PI   | US 20070120910 | A1   | 20070531 | US 2005-290202  | 20051130 |
| PRAI | US 2005-290202 |      | 20051130 |                 |          |
| GI   |                |      |          |                 |          |



I

AB The inks comprise a colorant, an initiator, and an ink vehicle which comprises (A)  $\geq 1$  radically curable monomer compd., and (B) a compd. of formula I, wherein R1 = alkylene, arylalkylene, or alkylarylene group; R2, R2' = alkylene, arylene, arylalkylene, or alkylarylene groups; R3 and R3' are either (a) photoinitiating groups, or (b) groups which are alkyl, aryl, arylalkyl, or alkylaryl groups,

provided that  $\geq 1$  of R3 and R3' is a photoinitiating group; and X and X' = O atom, or a group of the formula -NR4-, wherein R4 = H, an alkyl group, an aryl group, an arylalkyl group, or an alkylaryl group. Thus, Pripol 1009 (hydrogenated dimer fatty acid) 5.78, ethylene diamine 0.3, and Irgacure 2959 (2-hydroxy-1-[4-(2-hydroxyethoxy)phenyl]-2-methyl-1-propanone) 2.24 g were reacted to give 5.43 g amide gellant, 7.5 % of which was mixed with SR 9003, Irgacure 379 (2-dimethylamino-2-(4-methylbenzyl)-1-(4-morpholin-4-ylphenyl)-butanone) 3.0, Darocure ITX (isopropyl-9H-thioxanthen-9-one) 2.0, Irgacure 819 (bis(2,4,6-trimethylbenzoyl)-phenyl-phosphine oxide) 1.0, Irgacure 127 (2-hydroxy-1-(4-(4-(2-hydroxy-2-methylpropionyl)-benzyl)-phenyl)-2-methylpropan-1-one) 3.5, Irgastab UV10 0.2, and Sun Blue pigment 12.0% to give a title ink.

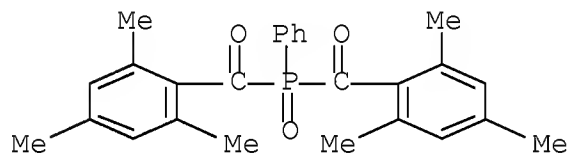
IT 162881-26-7, IRGACURE 819

(UV-curable phase change inks contg.

photoinitiator with phase change properties and gellant affinity)

RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)-  
(CA INDEX NAME)



INCL 347088000

CC 42-12 (Coatings, Inks, and Related Products)

Section cross-reference(s): 74

ST UV curable phase change ink photoinitiator  
gellant

IT Coloring materials

(Sun Yellow, Sun Black, Sun Blue, Sun Magenta; UV  
-curable phase change inks contg. photoinitiator with  
phase change properties and gellant affinity)

IT Inks

(hot-melt; UV-curable phase change inks  
contg. photoinitiator with phase change properties and gellant  
affinity)

IT Catalysts

(photochem.; UV-curable phase change inks  
contg. photoinitiator with phase change properties and gellant  
affinity)

IT Inks

(photocurable; UV-curable phase change inks  
contg. photoinitiator with phase change properties and gellant  
affinity)

IT 108-00-9DP, N,N-Dimethylethylenediamine, reaction product with  
ethylene diamine and hydrogenated dimer fatty acid 108-01-0DP,  
N,N-Dimethylethanolamine, reaction products with ethylene diamine  
and hydrogenated dimer fatty acid 111-77-3DP, Diethylene glycol  
monomethyl ether, reaction product with ethylene diamine,  
hydrogenated dimer fatty acid and photoinitiator 112-35-6DP,  
Triethylene glycol monomethyl ether, reaction product with ethylene  
diamine, hydrogenated dimer fatty acid and photoinitiator  
25498-49-1DP, Tripropylene glycol monomethyl ether, reaction product  
with ethylene diamine, hydrogenated dimer fatty acid and  
photoinitiator 34590-94-8DP, Dipropylene glycol monomethyl ether,  
reaction product with ethylene diamine, hydrogenated dimer fatty  
acid and photoinitiator

(UV-curable phase change inks contg.

photoinitiator with phase change properties and gellant affinity)

IT 107-15-3D, Ethylene diamine, reaction product with hydrogenated  
dimer fatty acid and photoinitiator 75081-21-9, DAROCUR ITX  
101484-78-0D, Tone M 100, reaction product with ethylene diamine,  
hydrogenated dimer fatty acid and photoinitiator 106797-53-9D,  
Irgacure 2959, reaction product with amines, alc. and hydrogenated  
dimer fatty acid 119344-86-4, IRGACURE 379 127290-22-6D, Pripol  
1009, reaction product with amines, alcs. and photoinitiator  
162881-26-7, IRGACURE 819 474510-57-1, IRGACURE 127  
938156-35-5, Irgastab UV 10

(UV-curable phase change inks contg.

photoinitiator with phase change properties and gellant affinity)

IT 31570-04-4, Irgafos 168

(UV-curable phase change inks contg.

photoinitiator with phase change properties and gellant affinity)

IT 84170-74-1, SR9003

(UV-curable phase change inks contg.

photoinitiator with phase change properties and gellant affinity)

L56 ANSWER 8 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 146:443570 HCA Full-text

TI UV- and heat-curable ink sets and  
image-recording method therewith

IN Koyanagi, Takashi; Nakano, Keitaro; Takemoto, Kiyohiko

PA Seiko Epson Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 17pp.

CODEN: JKXXAF

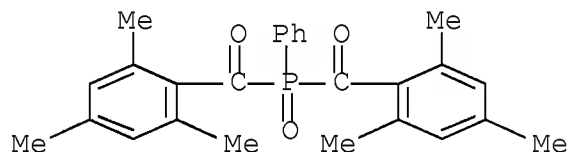
DT Patent

LA Japanese

FAN.CNT 1



|      | PATENT NO.<br>-----<br>-----   | KIND<br>---- | DATE<br>----- | APPLICATION NO.<br>----- | DATE         |
|------|--|--------------|---------------|--------------------------|--------------|
| PI   | JP 2007100054  | A            | 20070419      | JP 2005-295739           | 200510<br>07 |
| PRAI | JP 2005-295739   |              | 20051007      |                          |              |
| AB   | <p>A title set consists ≥1 photochem. radical polymn. initiator-contg. ink and ≥1 thermal radical polymn. initiator-contg. another ink. An ink contg. a pigment dispersion, allyl glycol (I) , N-vinylformamide (II) , SiO<sub>2</sub>-contg. Sila-Ace S 710 dispersion (A), Viscoat 360 (III), Irgacure 819, and Irgacure 127 was ink-jet-printed along with another ink contg. I, II, III, Aronix M 220, A, VF 70, and Kayacure DETX-S on a medium, then irradiated with 365-nm UV at 400 mJ/cm<sup>2</sup>, and post-cured at 50° for 12 h to form well-cured images.</p> |              |               |                          |              |
| IT   | <p>162881-26-7, Irgacure 819<br/>(photochem. and thermal radical polymn. initiator-contg. 2-component-based UV- and heat-curable printing inks)</p>  |              |               |                          |              |
| RN   | 162881-26-7 HCA  |              |               |                          |              |
| CN   | Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)-<br>(CA INDEX NAME)]  |              |               |                          |              |



CC 42-12 (Coatings, Inks, and Related Products)

ST UV heat curability two component printing ink;  
photochem radical polymn initiator component UV  
heat curable ink; thermally radical polymn  
initiator component UV heat curable ink

IT Inks  
(jet-printing; photochem. and thermal radical polymn.  
initiator-contg. 2-component-based UV- and heat-curable  
printing inks)

IT Polymerization catalysts  
(photochem., radical; photochem. and thermal  
radical polymn. initiator-contg. 2-component-based  
UV- and heat-curable printing inks)

IT Polymerization catalysts  
(radical, thermal; photochem. and thermal

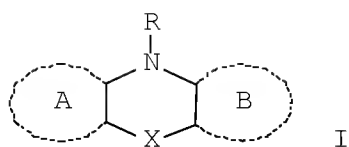
radical polymn. initiator-contg. 2-component-based  
 UV- and heat-curable printing inks)

IT 82799-44-8, Kayacure DETX-S 162881-26-7, Irgacure 819  
 474510-57-1, Irgacure 127 934538-17-7, VF 70  
 (photochem. and thermal radical polymn.  
 initiator-contg. 2-component-based UV- and heat-curable  
 printing inks)

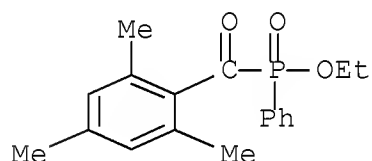
IT 13162-05-5DP, N-Vinylformamide, polymers with silica  
 sol-alkoxysilane condensates and allyl glycols and polyol  
 polyacrylates 42978-66-5DP, Aronix M 220, polymers with silica  
 sol-alkoxysilane condensates and allyl glycols and polyol  
 polyacrylates and vinylformamide 75577-70-7DP, Viscoat 360,  
 polymers with silica sol-alkoxysilane condensates and allyl glycols  
 and polyol polyacrylates and vinylformamide 654051-88-4DP,  
 polymers with allyl glycols and polyol polyacrylates and  
 vinylformamide  
 (photochem. and thermal radical polymn.  
 initiator-contg. 2-component-based UV- and heat-curable  
 printing inks)

L56 ANSWER 9 OF 35 HCA COPYRIGHT 2008 ACS on STN  
 AN 146:186147 HCA Full-text  
 TI Ink compositions with good colorant dispersibility,  
 printing method using them, and their printed articles  
 IN Tsujibata, Shigetomo  
 PA Fujifilm Holdings Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 39pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE         |
|------|-------------------|------|----------|-----------------|--------------|
|      | -----             | ---- | -----    | -----           |              |
|      | -----             |      |          |                 |              |
| PI   | JP 2007023073     | A    | 20070201 | JP 2005-203088  | 200507<br>12 |
| PRAI | JP 2005-203088    |      | 20050712 |                 |              |
| OS   | MARPAT 146:186147 |      |          |                 |              |
| GI   |                   |      |          |                 |              |



- AB The compns. contain colorants and I (R = alkyl, acyl, carbamoyl, alkoxycarbonyl, aryl, sulfonyl, sulfamoyl; X = direct bonding, alkylene, O, S, NR<sub>1</sub>, CO; R<sub>1</sub> = H, alkyl; at least one of A and B is an arom. ring). Thus, a compn. comprising quinacridone pigment (PR 122) 5.0, heterocyclic compd. prepd. by reacting 9(10H)-acridone with tetraethylene glycol Bu glycidyl ether 1.5, hexanediol diacrylate 60.0, caprolactone-modified dipentaerythritol hexaacrylate (DPCA 60) 27.5, and acylphosphine oxide (Lucirin TPO-L) 5.0 parts showed vol.-av. particle diam. (D50) <100 nm, good curability in irradiation of UV at 100 mJ/cm<sup>2</sup>, and no ppt. nor viscosity increase after storing at 25° or 70° for 1 mo.
- IT 84434-11-7, Lucirin TPO-L  
(polymn. initiator; heterocyclic dispersant-contg. jet-printing ink compns. with good colorant dispersibility)
- RN 84434-11-7 HCA
- CN Phosphinic acid, P-phenyl-P-(2,4,6-trimethylbenzoyl)-, ethyl ester  
(CA INDEX NAME)



- CC 42-12 (Coatings, Inks, and Related Products)
- ST jet printing ink compn colorant dispersibility; acridone tetraethylene glycol butyl glycidyl ether dispersant; hexanediol caprolactone modification dipentaerythritol acrylate quinacridone ink
- IT Dispersing agents  
Ink-jet printing  
(heterocyclic dispersant-contg. jet-printing ink compns. with good colorant dispersibility)
- IT Epoxy resins, uses  
(heterocyclic dispersant-contg. jet-printing ink)

compns. with good colorant dispersibility)

IT Inks  
(jet-printing; heterocyclic dispersant-contg. jet-printing  
ink compns. with good colorant dispersibility)

IT Polymerization catalysts  
(radical photochem. or photoacid generators;  
heterocyclic dispersant-contg. jet-printing ink compns.  
with good colorant dispersibility)

IT 25610-58-6DP, Butyl glycidyl ether homopolymer, acridon-10-yl-  
terminated 921435-58-7P 921435-59-8P  
(dispersant; heterocyclic dispersant-contg. jet-printing  
ink compns. with good colorant dispersibility)

IT 980-26-7, PR 122  
(for dispersants or pigment; heterocyclic dispersant-contg.  
jet-printing ink compns. with good colorant  
dispersibility)

IT 578-95-0, 9(10H)-Acridone 2426-08-6, Butyl glycidyl ether  
126021-43-0  
(heterocyclic dispersant-contg. jet-printing ink  
compns. with good colorant dispersibility)

IT 473925-57-4, Celloxide 3000-OXT 221 copolymer 786655-03-6  
(heterocyclic dispersant-contg. jet-printing ink  
compns. with good colorant dispersibility)

IT 18393-55-0D, Triphenylsulfonium, salts 84434-11-7, Lucirin  
TPO-L 273400-00-3, Cyracure UVI 6992  
(polymn. initiator; heterocyclic dispersant-contg. jet-printing  
ink compns. with good colorant dispersibility)

L56 ANSWER 10 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 146:164783 HCA Full-text

TI Photocurable ink compositions with good curability and  
dryability for ink-jet printing

IN Ueno, Shinya; Mori, Shiro; Ueda, Tsutomu

PA Fuji Pigment Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

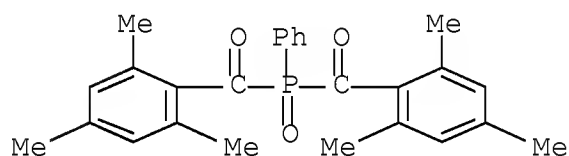
|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE         |
|------|----------------|------|----------|-----------------|--------------|
|      | -----          | ---- | -----    | -----           |              |
| PI   | JP 2007016180  | A    | 20070125 | JP 2005-201067  | 200507<br>11 |
| PRAI | JP 2005-201067 |      | 20050711 |                 |              |

AB The compns. contain (a) air-curable unsatd. polyester resin compns., (b) ethylenically unsatd. monomers, (c) pigments, and (d) photoinitiators generating radicals by photoirradn. Ink-jet inks using the above compns., ink-jet printing method on various moldings by using the inks, and printed moldings formed by the printing method are also claimed. Thus, a compn. contg. PolyLite CN 325 (air-curable unsatd. polyester), PolyLite FG 208 (unsatd. polyester), styrene, and a catalyst was mixed with Irgacure 819 (bisacylphosphine oxide photoinitiator), Irgacure 651 (benzoyldimethylketal photoinitiator), and a mill base contg. a blue pigment, a dispersant, styrene, and NK Ester A-SAL 9E (polyoxyethylene secondary alkyl ether acrylate) to give an ink compn., which was applied on a glass plate and UV-cured to show rapid drying.

IT 162881-26-7, Irgacure 819  
(photoinitiator; photocurable ink compns. with good curability and dryability for ink-jet printing)

RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)-  
(CA INDEX NAME)



CC 42-12 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 74

ST photocurable ink jet printing unsatd polyester styrene photoinitiator

IT Inks  
(jet-printing; photocurable ink compns. with good curability and dryability for ink-jet printing)

IT Crosslinking catalysts  
(photochem., ink compn. contg.; photocurable ink compns. with good curability and dryability for ink-jet printing)

IT Ink-jet printing  
(photocurable ink compns. with good curability and dryability for ink-jet printing)

IT Polyesters, uses  
(unsatd., styrene- and polyoxyalkylene acrylate-crosslinked; photocurable ink compns. with good curability and dryability for ink-jet printing)

IT 919837-04-0P  
(cured ink; photocurable ink compns. with  
good curability and dryability for ink-jet printing)  
IT 7473-98-5, Darocur 1173 24650-42-8, Irgacure 651  
162881-26-7, Irgacure 819  
(photoinitiator; photocurable ink compns. with good  
curability and dryability for ink-jet printing)

L56 ANSWER 11 OF 35 HCA COPYRIGHT 2008 ACS on STN  
AN 145:147618 HCA Full-text  
TI Radiation curable inks and jet printing images  
IN Odell, Peter G.; Toma, Eniko  
PA Xerox Corporation, USA  
SO U.S. Pat. Appl. Publ., 10 pp.  
CODEN: USXXCO  
DT Patent  
LA English  
FAN.CNT 1

|    | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|----|----------------|------|----------|-----------------|----------|
|    | -----          | ---- | -----    | -----           |          |
| PI | US 20060158492 | A1   | 20060720 | US 2005-34856   | 20050114 |
|    | JP 2006193744  | A    | 20060727 | JP 2006-5419    | 20060112 |

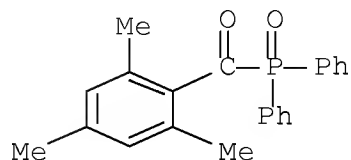
PRAI US 2005-34856 A 20050114

AB An ink that is used preferably in jet ink devices includes an ink vehicle, the ink vehicle being made up either (a) a first component curable by a first polymn. route and an assocd. photoinitiator, and a second component curable by a second polymn. route and as assocd. photoinitiator, where the second polymn. route is different from the first polymn. route, or (b) a component curable by a single polymn. route with a first and a second photoinitiator system in which the first system responds to longer wavelengths. An image may be formed by jetting onto a transfer member surface, curing the first component or partially curing the single component while upon the transfer member surface, transferring the ink to an image receiving surface, and completing curing. The first component is preferably curable via cationic polymn. and the second component is preferably curable via free radical polymn.

IT 75980-60-8, Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide  
84434-11-7 162881-26-7, Phenylbis(2,4,6-trimethylbenzoyl)phosphine oxide  
(curable inks utilizing long and short wavelength  
UV cure catalysts)

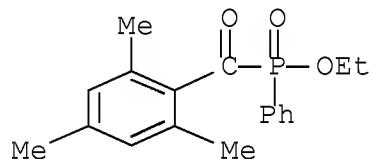
RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



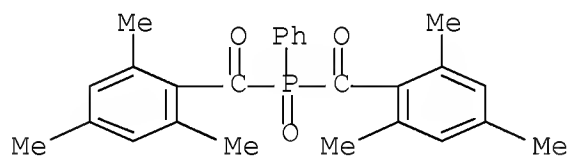
RN 84434-11-7 HCA

CN Phosphinic acid, P-phenyl-P-(2,4,6-trimethylbenzoyl)-, ethyl ester (CA INDEX NAME)



RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)- (CA INDEX NAME)



INCL 347096000; 522007000

CC 42-12 (Coatings, Inks, and Related Products)

ST jet printing ink radical cationic cure catalyst

IT Crosslinking catalysts

(cationic; curable inks utilizing long and short wavelength UV cure catalysts)

IT Inks

(jet-printing; curable inks utilizing long and short wavelength UV cure catalysts)

IT Crosslinking catalysts  
 (photochem.; curable inks utilizing long and short  
 wavelength UV cure catalysts)

IT Inks  
 (radiation-curable; curable inks utilizing long and  
 short wavelength UV cure catalysts)

IT 119-61-9, Benzophenone, uses 134-84-9, 4-Methylbenzophenone  
 947-19-3, Irgacure 184 954-16-5, 2,4,6-Trimethylbenzophenone  
 7473-98-5, 2-Hydroxy-2-methyl-1-phenyl-1-propanone 24650-42-8  
 71868-10-5 75081-21-9, Isopropylthioxanthone 75980-60-8,  
 Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide 84434-11-7  
 119313-12-1, 2-Benzyl 2-dimethylamino 1-(4-morpholinophenyl)butanone  
 133518-36-2, Esacure Tzt 161728-47-8, H-Nu470 162881-26-7  
 , Phenylbis(2,4,6-trimethylbenzoyl)phosphine oxide 273400-00-3,  
 UVI 6992 344562-80-7, CGI 552  
 (curable inks utilizing long and short wavelength  
 UV cure catalysts)

IT 898558-03-7P 898558-05-9P 898558-07-1P  
 (curable inks utilizing long and short wavelength  
 UV cure catalysts)

IT 899445-58-0, Laromer LR 8956  
 (curable inks utilizing long and short wavelength  
 UV cure catalysts)

IT 115055-18-0  
 (oligomer; curable inks utilizing long and short  
 wavelength UV cure catalysts)

L56 ANSWER 12 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 145:64652 HCA Full-text

TI Ink compositions with good curability and fastness, and  
 image forming method using them

IN Tsujibata, Shigetomo

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 24 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
|      | -----  | ---- | -----    | -----           |          |
| PI   | JP 2006160876  | A    | 20060622 | JP 2004-353982  | 20041207 |
| PRAI | JP 2004-353982   |      | 20041207 |                 |          |
| AB   | The radiation-curable compns., useful for ink-jet printing, contain colorants, radical generators, acid generators, and compds. having |      |          |                 |          |



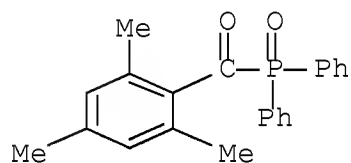
both radically polymerizable groups and cationically polymerizable groups. Thus, a compn. comprising (3-ethyl-3-oxetanyl)methyl acrylate, dipentaerythritol hexaacrylate (Kayarad DPHA), acylphosphine oxide (Lucirin TPO), triphenylsulfonium salt (Adeka Optomer SP 150), and yellow dye of 3-(1,1-dimethylethyl)-4-[[5-[(2-hexyldecyl)thio]-1,3,4- thiadiazol-2-yl]azo]-1-phenyl-1H-Pyrazol-5-amine was jet-printed, then irradiated with UV to give images showing good adhesion and no tack.

IT 75980-60-8, Lucirin TPO

(radical generator; jet-printing ink compns.  
with good curability and fastness)

RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



CC 42-12 (Coatings, Inks, and Related Products)

ST radical radiation curability ink compn jet  
printing; ethyloxetanylmethyl acrylate acylphosphine oxide  
phenylsulfonium fastness

IT Ink-jet printing

(jet-printing ink compns. with good curability and  
fastness)

IT Inks

(jet-printing; jet-printing ink compns. with good  
curability and fastness)

IT Dyes

(oil-sol., colorants; jet-printing ink compns. with  
good curability and fastness)

IT 106220-70-6, Adeka Optomer SP 150

(acid generator; jet-printing ink compns. with good  
curability and fastness)

IT 575502-03-3 658076-16-5 864227-48-5

(colorant; jet-printing ink compns. with good  
curability and fastness)

IT 891786-29-1P 891786-30-4P 891786-31-5P

(jet-printing ink compns. with good curability and  
fastness)

IT 75980-60-8, Lucirin TPO

(radical generator; jet-printing ink compns.  
with good curability and fastness)

L56 ANSWER 13 OF 35 HCA COPYRIGHT 2008 ACS on STN  
AN 144:234728 HCA Full-text  
TI Photopolymerizable epoxide and oxetane compositions  
IN Crivello, James V.  
PA USA  
SO U.S. Pat. Appl. Publ., 17 pp.  
CODEN: USXXCO  
DT Patent  
LA English

FAN.CNT 1

|    | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|----|----------------|------|----------|-----------------|----------|
|    | -----          | ---- | -----    | -----           |          |
| PI | US 20060041032 | A1   | 20060223 | US 2005-209530  | 20050823 |

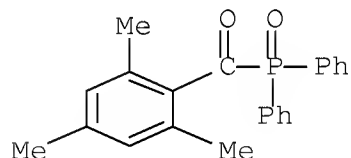
PRAI US 2004-603698P P 20040823

AB Title radiation-curable compns. contain a radiation-curable epoxide, oxetane compns., and a free radical photoinitiator. Thus, 0.1 g [4-(pentadecyloxy)phenyl]phenyliodonium hexafluoroantimonate was dissolved in 0.5 g dichloromethane, irradiated with an UV-light for 1 min, and added into 0.5 g 3-ethyl-3-(phenoxymethyl)-oxetane, showing fast polymn.

IT 75980-60-8, (2,4,6-Trimethylbenzoyl)diphenylphosphine oxide  
162881-26-7, Irgacure 819  
(photoinitiator; photopolymerizable epoxide and oxetane compns.)

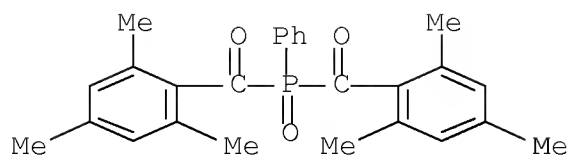
RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)-  
(CA INDEX NAME)]



INCL 522031000

CC 42-9 (Coatings, Inks, and Related Products)

Section cross-reference(s): 35

IT Polymerization catalysts

(photochem., radical; photopolymerizable epoxide and oxetane compns.)

IT Inks

(photopolymerizable epoxide and oxetane compns.)

IT 947-19-3, 1-Hydroxycyclohexylphenylketone 6175-45-7,  
2,2-Diethoxyacetophenone 7473-98-5, 2-Hydroxy-2-methyl-1-  
phenylpropan-1-one 22499-11-2, Benzoin butyl ether 24650-42-8,  
Irgacure 651 41996-78-5, 2,2-Diethoxy-2-phenylacetophenone  
51326-37-5 54149-76-7, 2,2-Dibutoxyacetophenone 75980-60-8  
, (2,4,6-Trimethylbenzoyl)diphenylphosphine oxide 121239-75-6  
125892-42-4 153606-14-5, Diphenyliodonium  
tetrakis(pentafluorophenyl)borate 162881-26-7, Irgacure  
819

(photoinitiator; photopolymerizable epoxide and oxetane compns.)

L56 ANSWER 14 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 144:109039 HCA Full-text

TI In situ monitoring of ultrafast photopolymerizations by real-time  
infrared spectroscopy

AU Decker, Christian

CS Departement de Photochimie Generale (UMR 7525-CNRS), Ecole Nationale  
Superieure de Chimie de Mulhouse, Mulhouse, 68200, Fr.

SO Polymer News (2005), 30(2), 34-48

CODEN: PLYNBU; ISSN: 0032-3918

PB Taylor & Francis, Inc.

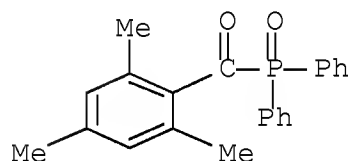
DT Journal

LA English

AB The photoinitiated polymn. of multifunctional monomers has been  
monitored in real time by IR spectroscopy. Conversion vs. time  
curves have been directly recorded for polymn. occurring within  
seconds upon intense illumination. The influence on the polymn.  
kinetics of the photoinitiator, the monomer, and the functionalized  
oligomer has been quantified for acrylate monomers undergoing radical  
polymn. and for epoxy monomers undergoing cationic polymn. Real-time

IR (RTIR) spectroscopy proved to be particularly well suited to follow the polymn. of monomer mixts. leading to the formation of either crosslinked copolymers or interpenetrating polymer networks. It was also used to study the UV curing of filled acrylate resins contg. colored pigments or clay particles which generate nanocomposite materials. Up to a few millimeter thick samples were analyzed by near IR spectroscopy, by following continuously the disappearance of the acrylate double bond overtone band on UV-exposure. Real-time monitoring, sensitivity, short response time, and versatility are among the prominent advantages of this powerful tool of investigation.

IT 75980-60-8, Lucirin TPO  
 (photoinitiator; in-situ monitoring of ultrafast photochem. curing of various resins by real-time IR spectroscopy)  
 RN 75980-60-8 HCA  
 CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 35, 42  
 IT Inks  
 (printing; in-situ monitoring of ultrafast photochem. curing of various resins by real-time IR spectroscopy)  
 IT 7473-98-5 24650-42-8, DMPA 57835-99-1 58109-40-3  
 75980-60-8, Lucirin TPO 116325-79-2, Acticryl CL 960  
 142770-42-1 344562-80-7, Irgacure 250 521274-90-8, Rhodorsil 2071  
 (photoinitiator; in-situ monitoring of ultrafast photochem. curing of various resins by real-time IR spectroscopy)  
 RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 15 OF 35 HCA COPYRIGHT 2008 ACS on STN  
 AN 143:116919 HCA Full-text  
 TI Radical polymerizable polyester compositions for UV-curable coatings and printing inks with good adhesion to metal or plastic substrates, toughness and impact resistance

IN Furingusu, Rainer B.; Shibata, Ou; Gurae, Geruwarudo F.  
 PA Dainippon Ink and Chemicals, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 23 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
|    | -----         | ---- | -----    | -----           |          |
| PI | JP 2005179511 | A    | 20050707 | JP 2003-422566  | 20031219 |

PRAI JP 2003-422566 20031219

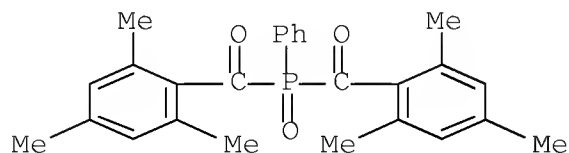
AB The compn. comprises a high branched polyester having unsatd. double bond in its end prepd. by Diels-Alder reaction of a multifunctional sorbic acid ester with a multifunctional acrylic acid ester, wherein the esters have different functionality nos.; and a photopolymn. initiator. Thus, 65 parts dipropylene glycol diacrylate-poly(ethylene glycol) trimethylolpropane ether trisorbate copolymer was mixed with 35 parts dipropylene glycol diacrylate, 3 parts diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide and 2 parts 2-hydroxy-2-methyl-1-phenylpropan-1-one, coated on an aluminum or a PET film, and UV-cured, showing viscosity (25°) 0.0185 Pa-s, shrinkage rate 7.0% and good adhesion to aluminum or PET film.

IT 162881-26-7, Bis(2,4,6-trimethylbenzoyl)phenyl phosphine oxide

(Irgacure 801; radical polymerizable polyester compns. for UV-curable coatings and printing inks with good adhesion to metal or plastic substrates, toughness and impact resistance)

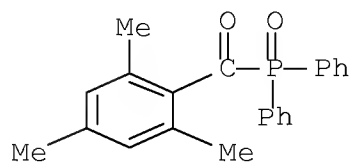
RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)-  
 (CA INDEX NAME)



IT 75980-60-8, Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide  
 (radical polymerizable polyester compns. for UV  
 -curable coatings and printing inks with good adhesion

to metal or plastic substrates, toughness and impact resistance)  
 RN 75980-60-8 HCA  
 CN Methanone, (diphenylphosphinyl) (2,4,6-trimethylphenyl)- (CA INDEX NAME)



IC ICM C09D167-06  
 ICS C08F002-50; C08F283-01; C08G063-553; C09D007-12; C09D011-10  
 CC 42-10 (Coatings, Inks, and Related Products)  
 ST polyester unsatd high branched UV curable coating; sorbate acrylate ester Diels Alder reaction  
 IT Polymerization  
 (Diels-Alder-type; radical polymerizable polyester compns. for UV-curable coatings and printing inks with good adhesion to metal or plastic substrates, toughness and impact resistance)  
 IT Coating materials  
 (UV-curable; radical polymerizable polyester compns. for UV-curable coatings and printing inks with good adhesion to metal or plastic substrates, toughness and impact resistance)  
 IT Polyesters, preparation  
 (acrylates; radical polymerizable polyester compns. for UV-curable coatings and printing inks with good adhesion to metal or plastic substrates, toughness and impact resistance)  
 IT Polyesters, uses  
 (acrylic; radical polymerizable polyester compns. for UV-curable coatings and printing inks with good adhesion to metal or plastic substrates, toughness and impact resistance)  
 IT Crosslinking catalysts  
 (photochem.; radical polymerizable polyester compns. for UV-curable coatings and printing inks with good adhesion to metal or plastic substrates, toughness and impact resistance)  
 IT Inks  
 (photocurable; radical polymerizable polyester compns. for UV-curable coatings and printing inks)

with good adhesion to metal or plastic substrates, toughness and impact resistance)

IT Diels-Alder reaction  
 (radical polymerizable polyester compns. for UV  
 -curable coatings and printing inks with good adhesion  
 to metal or plastic substrates, toughness and impact resistance)

IT Polyesters, miscellaneous  
 (radical polymerizable polyester compns. for UV  
 -curable coatings and printing inks with good adhesion  
 to metal or plastic substrates, toughness and impact resistance)

IT Plastic films  
 (substrates; radical polymerizable polyester compns.  
 for UV-curable coatings and printing inks  
 with good adhesion to metal or plastic substrates, toughness and impact resistance)

IT Metals, miscellaneous  
 (substrates; radical polymerizable polyester compns.  
 for UV-curable coatings and printing inks  
 with good adhesion to metal or plastic substrates, toughness and impact resistance)

IT 162881-26-7, Bis(2,4,6-trimethylbenzoyl)phenyl phosphine oxide  
 (Irgacure 801; radical polymerizable polyester compns.  
 for UV-curable coatings and printing inks  
 with good adhesion to metal or plastic substrates, toughness and impact resistance)

IT 119-61-9D, Benzophenone, derivs. 7473-98-5, 2-Hydroxy-2-methyl-1-phenylpropan-1-one 24650-42-8, 2,2-Dimethoxy-1,2-diphenylethan-1-one 75980-60-8, Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide  
 (radical polymerizable polyester compns. for UV  
 -curable coatings and printing inks with good adhesion  
 to metal or plastic substrates, toughness and impact resistance)

IT 586390-68-3P 586390-72-9P 639513-59-0P 639806-14-7P  
 856895-46-0P 856895-47-1P 856895-48-2P  
 (radical polymerizable polyester compns. for UV  
 -curable coatings and printing inks with good adhesion  
 to metal or plastic substrates, toughness and impact resistance)

IT 586390-70-7P  
 (radical polymerizable polyester compns. for UV  
 -curable coatings and printing inks with good adhesion  
 to metal or plastic substrates, toughness and impact resistance)

IT 639513-51-2P 639513-53-4P 639513-54-5P 639513-55-6P  
 639513-57-8P 639513-58-9P 639513-60-3P 639806-12-5P  
 639806-16-9P  
 (radical polymerizable polyester compns. for UV  
 -curable coatings and printing inks with good adhesion

to metal or plastic substrates, toughness and impact resistance)  
IT 7429-90-5, Aluminum, miscellaneous 25038-59-9, miscellaneous  
(substrate; radical polymerizable polyester compns. for  
UV-curable coatings and printing inks with good  
adhesion to metal or plastic substrates, toughness and impact  
resistance)

L56 ANSWER 16 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 142:491863 HCA Full-text

TI Electrical connection of components

IN Fox, James Edward; Hudd, Alan Lionel; Robinson, Martyn John;  
Bentley, Philip Gareth; Johnson, Michael Graham; Williamson, Ian

PA Conductive Inkjet Technology Limited, UK

SO PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

| PATENT NO.       | KIND | DATE     | APPLICATION NO.  | DATE     |
|------------------|------|----------|--|----------|
| -----            | ---- | -----    | -----  |          |
| PI WO 2005044451 | A1   | 20050519 | WO 2004-GB4595   | 20041029 |
| WO 2005044451    | A9   | 20050630 |  |          |
| W:               |      |          | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |          |
| RW:              |      |          | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |
| WO 2004068389    | A2   | 20040812 | WO 2004-GB358  | 20040128 |
| WO 2004068389    | A3   | 20050210 |  |          |
| W:               |      |          | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA   |          |
| RW:              |      |          | BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,  |          |



AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,  
 DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
 SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,  
 MR, NE, SN, TD, TG

|   |    |          |                  |              |
|---|----|----------|------------------|--------------|
| EP 1590500  | A2 | 20051102 | EP 2004-705844   | 200401<br>28 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,<br>SK |    |          |                  |              |
| JP 2006516818   | T  | 20060706 | JP 2006-502211   | 200401<br>28 |
| US 20050130397  | A1 | 20050616 | US 2004-975499   | 200410<br>29 |
| EP 1678761  | A1 | 20060712 | EP 2004-818166   | 200410<br>29 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK                |    |          |                  |              |
| CN 1902755  | A  | 20070124 | CN 2004-80039450 | 200410<br>29 |
| JP 2007510301   | T  | 20070419 | JP 2006-537433   | 200410<br>29 |
| US 7243421  | B2 | 20070717 | US 2004-975500   | 200410<br>29 |
| US 20060134318  | A1 | 20060622 | US 2005-543311   | 200507<br>26 |

|      |                 |   |          |
|------|-----------------|---|----------|
| PRAI | GB 2003-25247   | A | 20031029 |
|      | WO 2004-GB358   | A | 20040128 |
|      | GB 2004-7303    | A | 20040331 |
|      | GB 2003-1933    | A | 20030128 |
|      | GB 2003-28221   | A | 20031205 |
|      | US 2003-527948P | P | 20031208 |
|      | GB 2004-1826    | A | 20040128 |
|      | GB 2004-358     | A | 20040128 |
|      | US 2004-540080P | P | 20040128 |
|      | US 2004-558479P | P | 20040401 |
|      | WO 2004-GB4595  | W | 20041029 |

AB A contact of a component is elec. connected to an assocd. contact of an elec. circuit, typically formed on a substrate, by depositing material between the contacts, the material forming or being

processed to form an elec. connection between the contact with good accuracy and at an inexpensive rate. The invention also provides app. for this purpose and a resulting circuit.

IT 174285-64-4, Irgacure 1700

(elec. connection of components in circuits by printing)

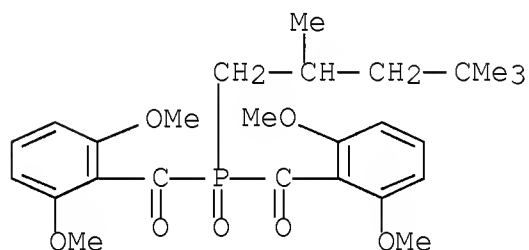
RN 174285-64-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (CA INDEX NAME)

CM 1

CRN 145052-34-2

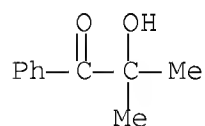
CMF C26 H35 O7 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



IC ICM B01L003-00

ICS D04H013-00; B01D029-01; B01D011-02; B01D017-02; B01J020-28;  
B32B005-22

CC 76-2 (Electric Phenomena)

Section cross-reference(s): 47, 48

IT Inks

(elec. conductive; elec. connection of components in circuits by printing)

IT Coating apparatus  
Coating process  
Conducting polymers  
Electric circuits  
Electric contacts  
Electrically conductive pastes  
Ink-jet printing  
Interconnections, electric  
Nanoparticles  
Printing (nonimpact)  
(elec. connection of components in circuits by printing)  
IT Electric conductors  
(inks; elec. connection of components in circuits by  
printing)  
IT Inks  
(printing; elec. connection of components in circuits by  
printing)  
IT 75-65-0, tert-Butanol, uses 107-21-1, Ethylene glycol, uses  
123-42-2, Diacetone alcohol 1320-67-8, Methoxypropanol 3375-31-3  
25322-68-3, Polyethylene glycol 29570-58-9, Dipentaerythritol  
hexaacrylate 57472-68-1, Dipropylene glycol diacrylate  
162881-26-7, Irgacure 819 174285-64-4, Irgacure 1700  
329033-23-0, Actilane 505 852150-57-3, Enplate 872A 852150-58-4,  
Enplate 872B 852150-59-5, Enplate 872C  
(elec. connection of components in circuits by printing)  
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 17 OF 35 HCA COPYRIGHT 2008 ACS on STN  
AN 142:356707 HCA Full-text  
TI Effects of photoinitiator and pigment on curing speed of ink  
-jet inks  
AU Zhu, Ling  
CS College of Environment Engineering and Environment Science, Donghua  
University, Shanghai, 200051, Peop. Rep. China  
SO Ranliao Yu Ranse (2004), 41(3), 158-160  
CODEN: RYRAAY; ISSN: 1672-1179  
PB Ranliao Yu Ranse Bianjibu  
DT Journal  
LA Chinese  
AB UV-curable ink compn. contains magenta pigment was prepd. The curing  
speeds of the ink were detd. to be 1.97-8.65 s by expts. with  
different photoinitiator. When the content of photoinitiator was 6%,  
curing speed was the fastest one; when the content of org. pigment  
was increased from 1% to 5%, the curing speeds increased from <1 s to  
6 s. The optimum pigment content is 3%.  
IT 880000-86-2

(Ciba 2020, curing photoinitiator; influence of photoinitiator and pigment on curing speed of ink-jet inks)

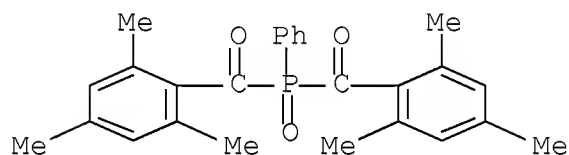
RN 880000-86-2 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with phenylbis(2,4,6-trimethylbenzoyl)phosphine oxide (CA INDEX NAME)

CM 1

CRN 162881-26-7

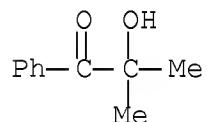
CMF C26 H27 O3 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



CC 42-12 (Coatings, Inks, and Related Products)

Section cross-reference(s): 41

ST jet ink photoinitiator pigment curing speed influence

IT Polyurethanes, uses

(acrylic; influence of photoinitiator and pigment on curing speed of ink-jet inks)

IT Crosslinking

(influence of photoinitiator and pigment on curing speed of ink-jet inks)

IT Inks

(jet-printing; influence of photoinitiator and pigment on curing speed of ink-jet inks)

IT Crosslinking catalysts

(photochem., photoinitiator; influence of photoinitiator and pigment on curing speed of ink-jet inks)

IT Crosslinking  
(photochem.; influence of photoinitiator and pigment on curing speed of ink-jet inks)

IT Pigments, nonbiological  
(red; influence of photoinitiator and pigment on curing speed of ink-jet inks)

IT 880000-86-2  
(Ciba 2020, curing photoinitiator; influence of photoinitiator and pigment on curing speed of ink-jet inks)

IT 119313-12-1, Ciba 369  
(Ciba 369, curing photoinitiator; influence of photoinitiator and pigment on curing speed of ink-jet inks)

IT 947-19-3, Runtecure 1104 71868-10-5, Runtecure 1107 75081-21-9, Runtecure 1105 162881-26-7, Ciba 819  
(curing photoinitiator; influence of photoinitiator and pigment on curing speed of ink-jet inks)

L56 ANSWER 18 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 141:25181 HCA Full-text

TI Radiation-curable hot-melt or liquid ink compositions and their printing method

IN Woudenberg, Richard C.

PA Markem Corporation, USA

SO PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| PATENT NO.       | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------|------|----------|-----------------|----------|
| -----            | ---- | -----    | -----           |          |
| PI WO 2004046260 | A2   | 20040603 | WO 2003-US36497 | 20031114 |

WO 2004046260 A3 20040826

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,

SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,  
MR, NE, SN, TD, TG

AU 2003290929 A1 20040615 AU 2003-290929 200311  
14

US 20040132862 A1 20040708 US 2003-714325 200311  
14

US 6896937 B2 20050524  
EP 1560888 A2 20050810 EP 2003-783514 200311  
14

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,  
SK  
JP 2006506511 T 20060223 JP 2004-553709 200311  
14

PRAI US 2002-426995P P 20021115  
WO 2003-US36497 W 20031114

AB The hot-melt ink compn. comprises a colorant(e.g., Sunfast Black 7),  
a polymerizable monomer (e.g., CD 406 and SR 368) and a  
photoinitiating system contg. 0.5-1.5% arom. ketone photoinitiator  
(e.g., Esacure TZT), 2-10% amine synergist (e.g., Sartomer CN 384),  
3-8%  $\alpha$ -cleavage-type photoinitiator (e.g., Irgacure 907) and 0.5-1.5%  
photosensitizer (e.g., isopropylthioxanthone). The liq. ink compn.  
comprises a colorant, a liq. polymerizable monomer, and a  
photoinitiating system contg. 2-4% arom. ketone photoinitiator, 5-10%  
amine synergist, 5-10%  $\alpha$ -cleavage-type photoinitiator and 2-4%  
photosensitizer. The printing method comprises printing the  
radiation-curable hot-melt or liq. ink compn. on a substrate to form  
an image and irradiating the image.

IT 174285-64-4, Irgacure 1700  
(radiation-curable hot-melt or liq. ink compns. and  
their printing method)

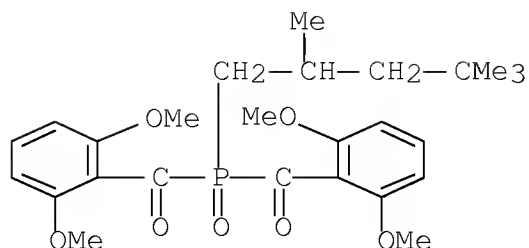
RN 174285-64-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with  
bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (CA  
INDEX NAME)

CM 1

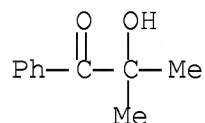
CRN 145052-34-2

CMF C26 H35 O7 P



CM 2

CRN 7473-98-5  
CMF C10 H12 O2



IC ICM C09D  
CC 42-12 (Coatings, Inks, and Related Products)  
ST radiation curable hot melt ink compn; printing radiation  
curable liq ink; ketone alpha cleavage photoinitiator  
amine synergist photosensitizer  
IT Polyoxyalkylenes, uses  
(acrylic; radiation-curable hot-melt or liq. ink  
compns. and their printing method)  
IT Ketones, uses  
(arom.; radiation-curable hot-melt or liq. ink compns.  
and their printing method)  
IT Inks  
(hot-melt; radiation-curable hot-melt or liq. ink  
compns. and their printing method)  
IT Polymerization catalysts  
(photopolymn.; radiation-curable hot-melt or liq. ink  
compns. and their printing method)  
IT Inks  
(printing, radiation-curable; radiation-curable hot-melt or liq.  
ink compns. and their printing method)  
IT Photosensitizers, pharmaceutical  
Printing (nonimpact)  
(radiation-curable hot-melt or liq. ink compns. and

their printing method)

IT Amines, uses  
(synergists; radiation-curable hot-melt or liq. ink  
comps. and their printing method)

IT 71868-10-5, Irgacure 907 75081-21-9, ITX 119313-12-1, Irgacure  
369 133518-36-2, Esacure Tzt 174285-64-4, Irgacure 1700  
211688-19-6, CN 384  
(radiation-curable hot-melt or liq. ink comps. and  
their printing method)

IT 697757-63-4 697757-64-5 697757-65-6, SR 247-SR 368-SR 454  
copolymer 697757-66-7 697757-67-8 697757-68-9 697757-69-0  
697757-70-3 697757-71-4  
(radiation-curable hot-melt or liq. ink comps. and  
their printing method)

L56 ANSWER 19 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 140:272463 HCA Full-text

TI Printing ink for ink-jet printing

IN Noutary, Carole

PA Sericol Limited, UK

SO PCT Int. Appl., 13 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 2004005412   | A2   | 20040115 | WO 2003-GB2954  | 20030708 |
| WO 2004005412   | A3   | 20040304 |                 |          |
| WO 2004005412   | A9   | 20040401 |                 |          |
| WO 2004005412   | A8   | 20040826 |                 |          |
| W: JP, US   |      |          |                 |          |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR    |      |          |                 |          |
| EP 1551931  | A2   | 20050713 | EP 2003-762811  | 20030708 |
| EP 1551931  | B1   | 20060222 |                 |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK |      |          |                 |          |
| JP 2005532445   | T    | 20051027 | JP 2004-519003  | 20030708 |
| PRAI GB 2002-15854  | A    | 20020709 |                 |          |



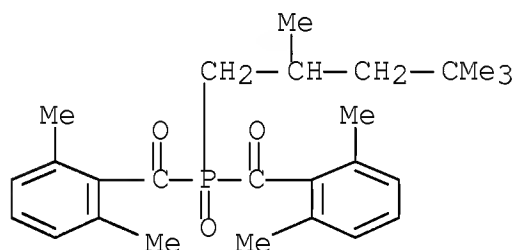
WO 2003-GB2954 W 20030708

AB This invention relates to inks for use in ink-jet printers that are cured using UV radiation. Specifically, the present invention relates to an ink-jet ink which is substantially free of water, volatile org. solvents and multifunctional (meth)acrylates, comprising at least one monofunctional (meth)acrylate monomer, at least one  $\alpha,\beta$ -unsatd. ether monomer, at least one radical photoinitiator and at least one coloring agent, the ink having a viscosity of less than 50 mPas at 25°. This provides extra-low viscosity inks, which still meet the requirements for printing onto porous substrates such as paper and board.

IT 151250-02-1, Bis(2,6-dimethylbenzoyl)-2,4,4-trimethylpentylphosphine oxide  
(printing ink for ink-jet printing)

RN 151250-02-1 HCA

CN Phosphine oxide, bis(2,6-dimethylbenzoyl)(2,4,4-trimethylpentyl)-  
(CA INDEX NAME)



IC ICM C09D011-00

ICS C09D011-10

CC 42-12 (Coatings, Inks, and Related Products)

ST radical photocrosslinking jet printing ink

IT Pigments, nonbiological

(dispersible; printing ink for ink-jet printing)

IT Inks

(jet-printing; printing ink for ink-jet printing)

IT Crosslinking catalysts

(photochem., radical; printing ink for ink-jet printing)

IT Coloring materials

(printing ink for ink-jet printing)

IT 119-61-9, Benzophenone, uses 947-19-3, 1-Hydroxycyclohexyl phenyl ketone 24650-42-8 119313-12-1 151250-02-1,

Bis(2,6-dimethylbenzoyl)-2,4,4-trimethylpentylphosphine oxide  
(printing ink for ink-jet printing)

IT 764-48-7, Ethylene glycol monovinyl ether 764-99-8, Diethylene  
glycol divinyl ether 765-12-8, Triethylene glycol divinyl ether  
2156-96-9, Decyl acrylate 2399-48-6, Tetrahydrofurfurylacrylate  
2499-59-4, Octylacrylate 5888-33-5, Isobornyl acrylate  
7328-17-8, 2-(2-Ethoxyethoxy) ethylacrylate 17351-75-6,  
1,4-Cyclohexanedimethanol divinyl ether 48145-04-6, Phenoxyethyl  
acrylate

(printing ink for ink-jet printing)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 20 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 139:165989 HCA Full-text

TI Water-thinned ink-jet inks and image recording  
method

IN Yamanouchi, Junichi; Ishizuka, Takahiro; Sano, Kazue

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 26 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|    | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE         |
|----|----------------|------|----------|-----------------|--------------|
|    | -----          | ---- | -----    | -----           |              |
| PI | JP 2003221529  | A    | 20030808 | JP 2002-21721   | 200201<br>30 |
|    | US 20030199609 | A1   | 20031023 | US 2003-352883  | 200301<br>29 |

PRAI JP 2002-21721 A 20020130

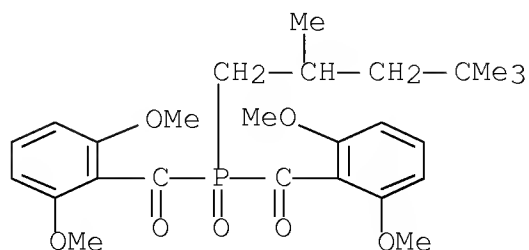
AB The inks, having good dye dispersing stability and printability,  
contain polymn. initiators and aq. dispersions of colored  
microparticles, wherein the microparticle dispersions contain  
hydrophobic monomers and oil-sol. dyes. Thus, an aq. dispersion of  
an oil-sol. dye, pentaerythritol tetraacrylate, and 1,1'-azobis(1-  
acetoxy-1-phenylethane) was formulated into an ink-jet ink, which was  
printed on paper, and heated to give images showing good scratch,  
water, and light resistance.

IT 145052-34-2, Bis(2,6-dimethoxybenzoyl)-2,4,4-  
trimethylpentylphosphine oxide

(oil-sol. dye-based water-thinned ink-jet inks  
with good scratch, water, and light resistance)

RN 145052-34-2 HCA

CN Methanone, 1,1'-[(2,4,4-trimethylpentyl)phosphinylidene]bis[1-(2,6-dimethoxyphenyl)- (CA INDEX NAME)



IC ICM C09D011-00  
ICS B41J002-01; B41M005-00; C09B055-00

CC 42-12 (Coatings, Inks, and Related Products)

ST oil sol dye water thinned jet printing ink;  
pentaerythritol tetraacrylate polymer jet printing ink;  
water light resistance aq jet printing ink

IT Inks  
(jet-printing, water-thinned; oil-sol. dye-based water-thinned ink-jet inks with good scratch, water, and light resistance)

IT Polymerization catalysts  
(photopolymn.; oil-sol. dye-based water-thinned ink-jet inks with good scratch, water, and light resistance)

IT Inks  
(printing, UV-curable; oil-sol. dye-based water-thinned ink-jet inks with good scratch, water, and light resistance)

IT Polymerization catalysts  
(radical, azo compds.; oil-sol. dye-based water-thinned ink-jet inks with good scratch, water, and light resistance)

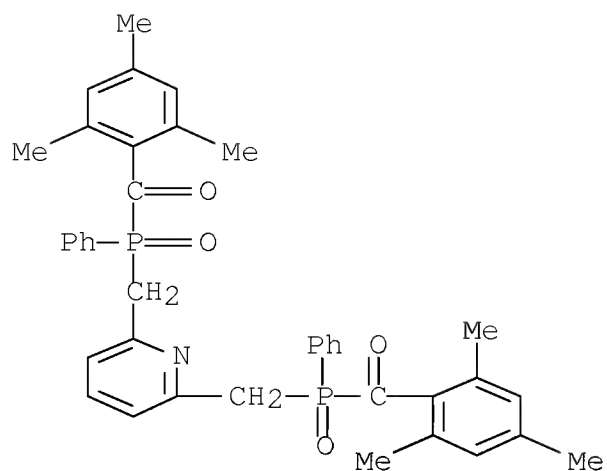
IT 78-67-1, AIBN 947-19-3, 1-Hydroxycyclohexyl phenyl ketone  
4419-11-8, V 65 24650-42-8 57908-47-1, 1,1'-Azobis(1-acetoxy-1-phenylethane) 145052-34-2, Bis(2,6-dimethoxybenzoyl)-2,4,4-trimethylpentylphosphine oxide  
(oil-sol. dye-based water-thinned ink-jet inks with good scratch, water, and light resistance)

IT 36446-02-3, Trimethylolpropane triacrylate homopolymer 57592-66-2,  
Pentaerythritol tetraacrylate homopolymer 67653-78-5,  
Dipentaerythritol hexaacrylate homopolymer 459429-17-5  
573989-99-8 573990-00-8 573990-01-9 573990-02-0  
(oil-sol. dye-based water-thinned ink-jet inks with good scratch, water, and light resistance)

L56 ANSWER 21 OF 35 HCA COPYRIGHT 2008 ACS on STN  
 AN 139:8199 HCA Full-text  
 TI Multimer forms of acylphosphines and their oxide or sulfide  
 derivatives, preparation, and photoinitiator use  
 IN Wolf, Jean-Pierre; Hug, Gebhard  
 PA Ciba Specialty Chemicals Holding Inc., Switz.  
 SO PCT Int. Appl., 77 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

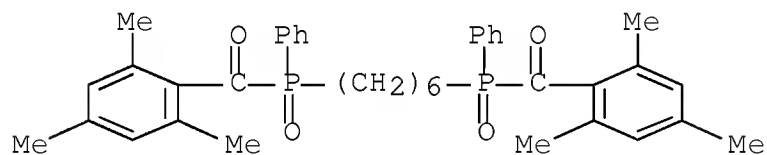
|    | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|----|---|------|----------|-----------------|--------------|
|    | -----   | ---- | -----    | -----           |              |
| PI | WO 2003044030   | A1   | 20030530 | WO 2002-EP12680 | 200211<br>13 |
|    | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,<br>CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,<br>GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,<br>LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,<br>NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL,<br>TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,<br>ZW<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,<br>BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,<br>EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR,<br>BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,<br>TG |      |          |                 |              |
|    | CA 2467576  | A1   | 20030530 | CA 2002-2467576 | 200211<br>13 |
|    | AU 2002366198   | A1   | 20030610 | AU 2002-366198  | 200211<br>13 |
|    | EP 1446410  | A1   | 20040818 | EP 2002-790367  | 200211<br>13 |
|    |   |      |          |                 | 200211<br>13 |
|    | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK  |      |          |                 |              |
|    | BR 2002014324   | A    | 20041103 | BR 2002-14324   | 200211<br>13 |
|    | CN 1589276  | A    | 20050302 | CN 2002-822914  | 200211<br>13 |

|                     |  |          |                |              |
|---------------------|--|----------|----------------|--------------|
| JP 2005509685       | T  | 20050414 | JP 2003-545667 | 200211<br>13 |
| US 20050004247      | A1   | 20050106 | US 2004-495958 | 200405<br>17 |
| US 7109250          | B2   | 20060919 |                |              |
| MX 2004PA04729      | A  | 20040730 | MX 2004-PA4729 | 200405<br>19 |
| PRAI EP 2001-811113 | A  | 20011120 |                |              |
| WO 2002-EP12680     | W  | 20021113 |                |              |
| OS MARPAT 139:8199  |  |          |                |              |
| AB                  | <p>The title compds. have the formula ACO(R)P:Ex(W)nL, where E = O or S; and x = 0 or 1, A = cyclopentyl, cyclohexyl, naphthyl, biphenyl, anthracyl or O, S or N contg. 5- or 6- membered heterocyclic ring, where the radicals are unsubstituted or substituted by halogen, C1-4-alkyl or C1-C4alkoxy; or A = R1-5C6, R = C1-24-alkyl, unsubstituted or substituted, C2-24-alkyl which is interrupted once or more than once by nonconsecutive O, S or NR14 and which is unsubstituted or substituted, C2-C24alkenyl which is uninterrupted or interrupted once or more than once by nonconsecutive O, S or NR14 and which is unsubstituted or substituted, C5-C24cycloalkenyl which is uninterrupted or interrupted once or more than once by nonconsecutive O, S or NR14 and which is unsubstituted or substituted; C7-C24arylalkyl which is unsubstituted or substituted on the aryl group, C4-C24cycloalkyl which is uninterrupted or interrupted once or more than once by O, S or NR14 and which is unsubstituted or substituted, C8-C24arylcycloalkyl or C8-C24arylcycloalkenyl; or; W = bond, COO or CON(R15); L is a di-tri-or tetravalent linking group; n = 2,3 or 4; R11-15 = hydrocarbyl. A UV-curable white coating contained Ebecryl 830 67.5, hexanediol diacrylate 5.0, trimethylolpropane triacrylate 2.5, TiO2 25.0, and photoinitiator (reaction product of 2,6-bis(bromomethyl)pyridine and Li (2,4,6-trimethylbenzoyl)phenylphosphine) 2.0 parts.</p> |          |                |              |
| IT                  | <p>533937-97-2P 533937-98-3P 533937-99-4P<br/>533938-00-0P 533938-01-1P<br/>(acylphosphine deriv. photoinitiator for coatings)</p>   |          |                |              |
| RN                  | 533937-97-2 HCA  |          |                |              |
| CN                  | Pyridine, 2,6-bis[[phenyl(2,4,6-trimethylbenzoyl)phosphinyl]methyl]-<br>(CA INDEX NAME)  |          |                |              |



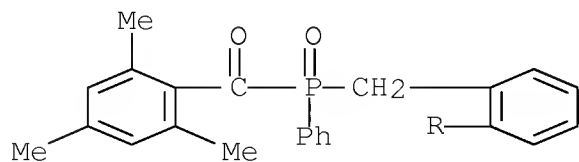
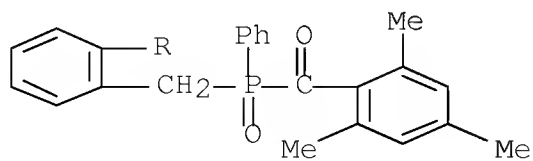
RN 533937-98-3 HCA

CN Phosphine oxide, 1,6-hexanediylbis[phenyl(2,4,6-trimethylbenzoyl)-  
(9CI) (CA INDEX NAME)]

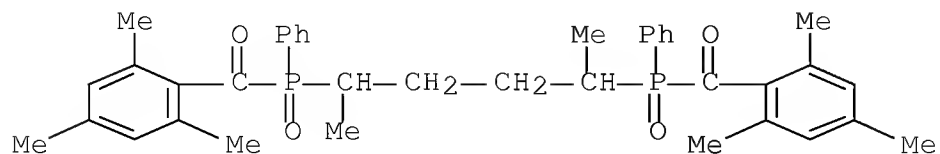


RN 533937-99-4 HCA

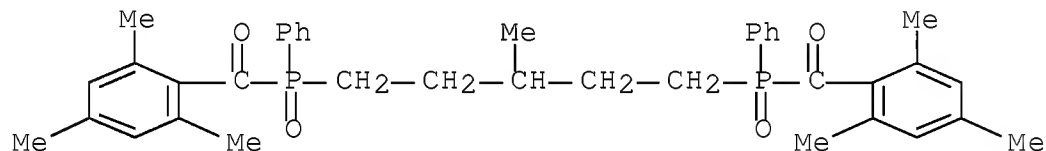
CN Phosphine oxide, [[1,1'-biphenyl]-2,2'-diylbis(methylene)]bis[phenyl  
(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)]



RN 533938-00-0 HCA  
 CN Phosphine oxide, (1,4-dimethyl-1,4-butanediyl)bis[phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



RN 533938-01-1 HCA  
 CN Phosphine oxide, (3-methyl-1,5-pentanediy)bis[phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



IC ICM C07F009-53  
 ICS C07F009-50; C07F009-58; G03F007-029; C08F002-50; C03C025-10  
 CC 42-3 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 29  
 IT Coating materials  
     (UV-curable; acylphosphine deriv. photoinitiator for coatings)  
 IT Adhesives  
     Dental materials and appliances  
     Inks  
     Optical filters  
     Optical switches  
     Recording materials  
     Resists  
     Stencils  
     Waveguides  
     (acylphosphine deriv. photoinitiator for)  
 IT 533937-97-2P 533937-98-3P 533937-99-4P  
     533938-00-0P 533938-01-1P  
     (acylphosphine deriv. photoinitiator for coatings)

RE.CNT 6        THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 22 OF 35 HCA COPYRIGHT 2008 ACS on STN  
AN 137:141971 HCA Full-text  
TI Ultraviolet radiation-curable ink-jet printing  
inks with low viscosity and tough printed images after  
curing  
IN Noutary, Carole  
PA Sericol Limited, UK  
SO PCT Int. Appl., 17 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE         |
|--|------|----------|-----------------|--------------|
| -----  | ---- | -----    | -----           |              |
| PI WO 2002061001   | A1   | 20020808 | WO 2002-GB368   | 200201<br>29 |
| W: JP, US<br>RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,<br>NL, PT, SE, TR |      |          |                 |              |
| GB 2371551   | A    | 20020731 | GB 2001-2227    | 200101<br>29 |
| GB 2371551   | B    | 20030730 |                 |              |
| EP 1358283   | A1   | 20031105 | EP 2002-716183  | 200201<br>29 |
| EP 1358283   | B1   | 20040929 |                 |              |
| EP 1358283   | B2   | 20070124 |                 |              |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, FI, CY, TR           |      |          |                 |              |
| JP 2004526820  | T    | 20040902 | JP 2002-561562  | 200201<br>29 |
| AT 277983  | T    | 20041015 | AT 2002-716183  | 200201<br>29 |
| US 7368485   | B2   | 20080506 | US 2004-470436  | 200403<br>15 |
| PRAI GB 2001-2227  | A    | 20010129 |                 |              |
| WO 2002-GB368  | W    | 20020129 |                 |              |

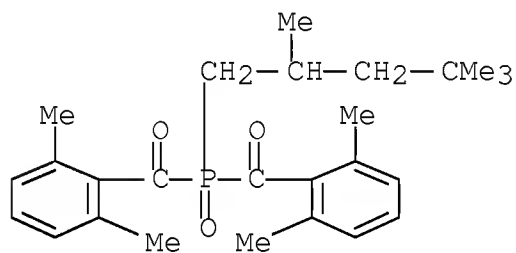


AB Title ink-jet ink comprises (I) at least one multifunctional (meth)acrylate monomer, (II) at least one  $\alpha,\beta$ - unsatd. ether monomer, (III) at least one radical photoinitiator, and (IV) at least one coloring agent. The ink is substantially free of water or volatile org. solvents and exhibits viscosity of less than 100 mPas at 25°. Thus, an ink compn. comprises propoxylated neopentyl glycol diacrylate 69.82, Actilane 505 1.56, Solsperse 32000 1.25, Hostaperm Red E 5B02 3.60, Genorad 16 0.12, Rapi-Cure DVE 3 10.0, Lucirin TPO 8.6, benzophenone 5.0, and Byk 307 0.05 part.

IT 151250-02-1, Bis(2,6-dimethylbenzoyl)-2,4,4-trimethylpentyl phosphine oxide  
(free radical photoinitiator; photopolymerizable ink compn. contg.)

RN 151250-02-1 HCA

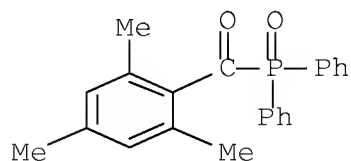
CN Phosphine oxide, bis(2,6-dimethylbenzoyl)(2,4,4-trimethylpentyl)- (CA INDEX NAME)



IT 75980-60-8, Lucirin TPO  
(photoinitiator; photopolymerizable ink compn. contg.)

RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



IC ICM C09D011-10

CC 42-12 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 74

ST UV radiation curable inkjet printing ink  
acrylic compn

IT Polyethers, uses  
(acrylic; manuf. of UV radiation-curable ink  
-jet printing inks)

IT Inks  
(jet-printing; manuf. of UV radiation-curable  
ink-jet printing inks)

IT Catalysts  
(photochem.; photopolymerizable ink compn. contg.)

IT Coloring materials  
Pigments, nonbiological  
(photopolymerizable ink compn. contg.)

IT Polymerization catalysts  
(radical; photopolymerizable ink compn.  
contg.)

IT Ethers, uses  
(vinyl; photopolymerizable ink compn. contg.)

IT 84170-74-1, Propoxylated neopentylglycol diacrylate  
(Actilane 421; photopolymerizable ink compn. contg.)

IT 58264-26-9, Hexanediol dimethacrylate  
(Photomer 2017; photopolymerizable ink compn. contg.)

IT 48145-04-6, Phenoxy ethyl acrylate  
(Sartomer 339; photopolymerizable ink compn. contg.)

IT 147-14-8, Irgalite Blue GLVO  
(blue pigment; photopolymerizable ink compn. contg.)

IT 119-61-9, Benzophenone, uses 947-19-3, Irgacure 184 24650-42-8,  
Benzil dimethylketal 119313-12-1, 2-Benzyl-2-dimethylamino-1-(4-  
morpholinophenyl)butan-1-one 151250-02-1,  
Bis(2,6-dimethylbenzoyl)-2,4,4-trimethylpentyl phosphine oxide  
(free radical photoinitiator; photopolymerizable  
ink compn. contg.)

IT 444611-01-2P, Actilane 505-propoxylated neopentyl glycol  
diacrylate-Rapi-Cure DVE 3 copolymer 444611-03-4P, Actilane  
505-1,6-hexanediol diacrylate-propoxylated neopentyl glycol  
diacrylate copolymer 444611-05-6P, Rapi-Cure DVE 3-Sartomer 350  
copolymer 444611-07-8P, 1,6-Hexanediol dimethacrylate-propoxylated  
neopentyl glycol diacrylate-Rapi-Cure DVE 3 copolymer  
444611-09-0P, 2-Phenoxyethyl acrylate-propoxylated neopentyl glycol  
diacrylate-Rapi-Cure DVE 3 copolymer 444611-11-4P, Actilane  
422-Rapi-Cure CHVE copolymer 444611-13-6P, Actilane 422-ethyl  
1-propenyl ether copolymer 444611-15-8P, Actilane  
422-2-cyclopenten-1-yl ether copolymer  
(manuf. of UV radiation-curable ink-jet  
printing inks)

IT 75980-60-8, Lucirin TPO  
(photoinitiator; photopolymerizable ink compn. contg.)

IT 764-48-7, Ethylene glycol monovinyl ether 764-99-8, Diethylene glycol divinyl ether 765-12-8, Rapicure DVE-3 928-55-2, Ethyl-1 Propenyl ether 2223-82-7, Neopentylglycol diacrylate 3290-92-4, Sartomer 350 3524-68-3, Pentaerythritol triacrylate 13048-33-4 15131-55-2, 2-Cyclopenten-1-yl ether 15625-89-5, Trimethylolpropane triacrylate 17351-75-6, Rapicure CHVE 17831-71-9, Tetraethyleneglycol diacrylate 29570-58-9, Dipentaerythritol hexaacrylate 57472-68-1, Actilane 422 (photopolymerizable ink compn. contg.)

IT 26570-48-9, Polyethyleneglycol diacrylate 28961-43-5, Ethoxylated trimethylolpropane triacrylate 52408-84-1, Tripropylene glycol triacrylate 329033-23-0, Actilane 505 (photopolymerizable ink compn. contg.)

IT 1047-16-1, Hostaperm Red E 5B02 (pigment; photopolymerizable ink compn. contg.)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 23 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 136:136296 HCA Full-text

TI Characterization of UV-curable inks and varnishes for flexo-printing on plastic films

AU Lombardi, V.; Sangermano, M.; Osella, A.; Priola, A.; Bigogno, A.

CS Dipartimento di Scienza dei Materiali e Ingegneria Chimica, Politecnico di Torino, Turin, 10129, Italy

SO FATIPEC Congress (2000), 25th(Vol. 3), 141-159  
CODEN: FAPVAP; ISSN: 0430-2222

PB AITIVA

DT Journal

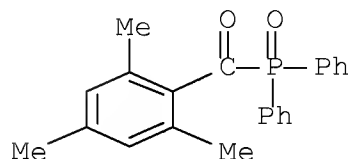
LA English

AB Different UV-curable formulations suitable for flexog. printing on plastic substrates were studied, including systems based on acrylic resins and cationic systems based on epoxy cycloaliph. resins and vinyl-ether oligomers. Both systems were evaluated for use in transparent and pigmented inks. The Brookfield viscosity of the resins was measured. The curing kinetics was studied as a function of photoinitiator, under N2 or air, using FTIR, DSC, and measurements of gelation rate and tack free time. For transparent inks, epoxy-acrylic, urethane, and polyester acrylic resins were dild. to the required viscosity. The best transparent formulations were then combined with different pigments and photoinitiators. Adhesion, rubbing, and blocking tests, color migration, and chem. resistance tests were carried out for all the inks. The best performance was obtained for acrylic polyesters (radical systems) and epoxy-cycloaliph. resins with polyol additives (cationic systems). These systems formed UV-cured thin films completely odor free and showed excellent properties as detd. by std. methods.

IT 75980-60-8, 2,4,6-Trimethylbenzoyldiphenylphosphine oxide  
(radical photoinitiator; curing kinetics and adhesion  
and stability of UV-curable resins for transparent and  
colored inks and varnishes for flexog. printing on  
plastic films)

RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX  
NAME)



CC 42-4 (Coatings, Inks, and Related Products)

ST acrylic resin UV curable transparent colored ink  
evaluation; epoxy cycloaliph resin UV curing kinetics  
photoinitiator; vinyl ether resin UV curable ink  
adhesion tack testing

IT Cellophane  
(PVDC lacquered; curing kinetics and adhesion and stability of  
UV-curable resins for transparent and colored  
inks and varnishes for flexog. printing on plastic films)

IT Epoxy resins, uses  
Polyesters, uses  
(acrylic; curing kinetics and adhesion and stability of  
UV-curable resins for transparent and colored  
inks and varnishes for flexog. printing on plastic films)

IT Adhesion, physical  
Gelation  
Plastic films  
Varnishes  
Viscosity  
(curing kinetics and adhesion and stability of UV  
-curable resins for transparent and colored inks and  
varnishes for flexog. printing on plastic films)

IT Crosslinking  
Crosslinking kinetics  
(photochem., UV; curing kinetics and adhesion and  
stability of UV-curable resins for transparent and  
colored inks and varnishes for flexog. printing on  
plastic films)

IT Inks

- (photocurable; curing kinetics and adhesion and stability of UV-curable resins for transparent and colored inks and varnishes for flexog. printing on plastic films)
- IT Polymerization catalysts  
(photopolymn.; curing kinetics and adhesion and stability of UV-curable resins for transparent and colored inks and varnishes for flexog. printing on plastic films)
- IT 57835-99-1, Triphenylsulfonium hexafluorophosphate 57840-38-7, Triphenylsulfonium hexafluoroantimonate  
(cationic initiator; curing kinetics and adhesion and stability of UV-curable resins for transparent and colored inks and varnishes for flexog. printing on plastic films)
- IT 765-12-8D, Triethyleneglycol divinyl ether, vinyl polymers 2386-87-0D, 3,4-Epoxy cyclohexylmethyl-3,4-epoxy cyclohexane carboxylate, vinyl polymers 3101-60-8D, p-tert-Butylphenylglycidyl ether, vinyl polymers 3454-29-3D, Trimethylolpropanetriglycidyl ether, vinyl polymers 13048-33-4D, epoxy polymers 16096-31-4D, Hexanedioldiglycidyl ether, vinyl polymers 17351-75-6D, 1,4-Cyclohexanedimethanoldivinyl ether, vinyl polymers 26142-30-3D, Polypropyleneglycoldiglycidyl ether, vinyl polymers 42978-66-5D, Tripropyleneglycol diacrylate, vinyl polymers 79586-49-5, Ebecryl 810  
(curing kinetics and adhesion and stability of UV-curable resins for transparent and colored inks and varnishes for flexog. printing on plastic films)
- IT 9002-85-1, PVDC  
(lacquer on cellophane and PP substrates; curing kinetics and adhesion and stability of UV-curable resins for transparent and colored inks and varnishes for flexog. printing on plastic films)
- IT 75081-21-9, Isopropylthioxanthone  
(photoinitiator activator; curing kinetics and adhesion and stability of UV-curable resins for transparent and colored inks and varnishes for flexog. printing on plastic films)
- IT 71868-10-5, 2-Methyl-1-[4-(methylthio)phenyl]-2-morpholinopropan-1-one 119313-12-1, 2-Benzyl-2-N-N-dimethylamino-1-(4-morpholinophenyl)-1-butanone  
(radical initiator; curing kinetics and adhesion and stability of UV-curable resins for transparent and colored inks and varnishes for flexog. printing on plastic films)
- IT 134-84-9, 4-Methylbenzophenone 954-16-5, 2,4,6-Trimethylbenzophenone 7473-98-5, -2-Hydroxy-2-methyl-1-phenyl-1-propanone 75980-60-3, 2,4,6-Trimethylbenzoyldiphenylphosphine oxide  
(radical photoinitiator; curing kinetics and adhesion

and stability of UV-curable resins for transparent and colored inks and varnishes for flexog. printing on plastic films)

IT 9003-07-0D, Polypropylene, corona-treated, lacquered (substrate; curing kinetics and adhesion and stability of UV-curable resins for transparent and colored inks and varnishes for flexog. printing on plastic films)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 24 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 135:154208 HCA Full-text

TI Preparation of water-thinned photocurable ink composition for circuit board printing

IN Tanabe, Seiichi; Takemoto, Kiyohiko; Taniguchi, Makoto

PA Seiko Epson Corp., Japan

SO PCT Int. Appl., 40 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO.  | DATE     |
|------|--|------|----------|------------------|----------|
|      | -----  | ---- | -----    | -----            |          |
| PI   | WO 2001057145  | A1   | 20010809 | WO 2001-JP697    | 20010201 |
|      | W: JP  |      |          |                  |          |
|      | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR |      |          |                  |          |
|      | US 20010047044   | A1   | 20011129 | US 2001-771706   | 20010130 |
|      | US 6608119   | B2   | 20030819 |                  |          |
|      | TW 546354  | B    | 20030811 | TW 2001-90101924 | 20010131 |
|      | EP 1172423   | A1   | 20020116 | EP 2001-948996   | 20010201 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI      |      |          |                  |          |
| PRAI | JP 2000-24430  | A    | 20000201 |                  |          |
|      | JP 2000-24433  | A    | 20000201 |                  |          |
|      | JP 2000-385532   | A    | 20001219 |                  |          |
|      | JP 2000-385533   | A    | 20001219 |                  |          |
|      | WO 2001-JP697  | W    | 20010201 |                  |          |

AB Title ink compn. comprises (A) pigments, (B) photocuring resins, (C) photocuring agents, and (D) aq. solvents, wherein B are composed of emulsive oligomers and other monomers, and the content of polar solvents, selected from 2-pyrrolidone, N- acryloylmorpholine, and N-vinyl-2-pyrrolidone, is 0.1-10 wt%. Thus, an ink compn. was prepd. from aq. TiO<sub>2</sub> 15.4, urethane oligomer NR-445 30.0, dipentaerythritol acrylate A-9530 8.0, Irgacure 1700 1.5, ethylene glycol 5.0, 2-pyrrolidone 2.0, and water 35.5 wt%.

IT 174285-64-4, Irgacure 1700  
(prepn. of water-thinned photocurable ink compn. for circuit board printing)

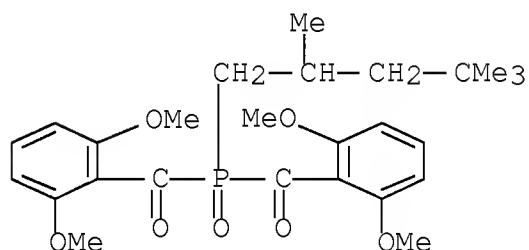
RN 174285-64-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (CA INDEX NAME)

CM 1

CRN 145052-34-2

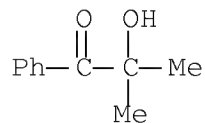
CMF C26 H35 O7 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



IC C09D011-00; H05K003-00; B41J002-01; B41M005-00; H05K001-02  
CC 42-12 (Coatings, Inks, and Related Products)

ST photocurable water thinned ink printed circuit board

IT Polyurethanes, uses  
(acrylic; prepn. of water-thinned photocurable ink compn. for circuit board printing)

IT Polymerization catalysts  
(photopolymn.; prepn. of water-thinned photocurable ink compn. for circuit board printing)

IT Pigments, nonbiological

Polar solvents

Printed circuit boards  
(prepn. of water-thinned photocurable ink compn. for circuit board printing)

IT Carbon black, uses  
(prepn. of water-thinned photocurable ink compn. for circuit board printing)

IT Inks  
(printing, photocurable; prepn. of water-thinned photocurable ink compn. for circuit board printing)

IT Inks  
(printing, water-thinned; prepn. of water-thinned photocurable ink compn. for circuit board printing)

IT 174285-64-4, Irgacure 1700  
(prepn. of water-thinned photocurable ink compn. for circuit board printing)

IT 295357-14-1P, NeoRad 445, polymer with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] 2-propenoate  
(prepn. of water-thinned photocurable ink compn. for circuit board printing)

IT 13463-67-7, Titania, uses  
(prepn. of water-thinned photocurable ink compn. for circuit board printing)

IT 88-12-0, N-Vinyl-2-pyrrolidone, uses 616-45-5, 2-Pyrrolidone  
5117-12-4, N-Acryloylmorpholine  
(prepn. of water-thinned photocurable ink compn. for circuit board printing)

IT 107-21-1, Ethylene glycol, uses  
(prepn. of water-thinned photocurable ink compn. for circuit board printing)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 25 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 135:108761 HCA Full-text

TI Optical fiber coating composition

IN Norlin, Tyson D.; Schouten, James John; Soutwell, John E.;  
Toussaint, Anthony F.; Abel, Adrianus Gijsbertus Maria

PA DSM N.V., Neth.



SO PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

|    | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE         |
|----|--|------|----------|-----------------|--------------|
|    | -----  | ---- | -----    | -----           |              |
| PI | WO 2001049792  | A1   | 20010712 | WO 2000-NL960   | 200012<br>27 |
|    | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,<br>CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH,<br>GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,<br>LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ,<br>PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ,<br>UA, UG, US, UZ, VN, YU, ZA, ZW |      |          |                 |              |
|    | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,<br>CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,<br>TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD,<br>TG  |      |          |                 |              |
|    | US 20020099110   | A1   | 20020725 | US 1999-475024  | 199912<br>30 |
|    | AU 2001032463  | A    | 20010716 | AU 2001-32463   | 200012<br>27 |
|    | EP 1252240   | A1   | 20021030 | EP 2000-991361  | 200012<br>27 |
|    | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |      |          |                 |              |
|    | JP 2003519277  | T    | 20030617 | JP 2001-550326  | 200012<br>27 |
|    | US 20030063882   | A1   | 20030403 | US 2002-187788  | 200207<br>03 |

PRAI US 1999-475024 A 19991230

US 2000-544209 A3 20000407

WO 2000-NL960 W 20001227

AB Radiation-curable compns. having improved release from matrix or bundling materials after cure comprises  $\geq 1$  radiation-curable oligomer and  $\geq 1$  oligomeric photoinitiator, or pigment mixts. These compns. can be formulated to serve as protective coatings for substrates manufd. from a wide variety of including glass, plastic, ceramic, metal and wood. The compns. of the present invention are preferably designed

for use as an optical fiber coating (including inner primary and, colored or uncolored, secondary coatings as well as other coatings which include inks, matrix materials and the like) or related optical fiber protective materials. Thus, a coating compn. having good release from matrix was prepd. from polyester urethane acrylate 33.6, ethoxylated bisphenol a diacrylate 47.52, trimethylol propane triacrylate 10.56, Irgacure 1700 3.84, Irganox 1035 0.48, and Esacure KIP 100F 4.00.,.

IT 174285-64-4, Irgacure 1700

(optical fiber coating compns. contg. radiation-curable oligomer and photoinitiator)

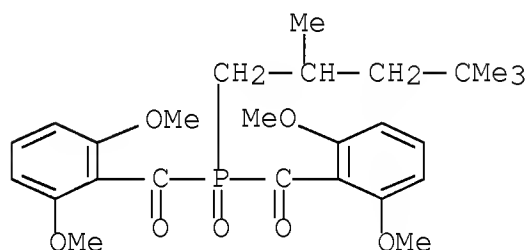
RN 174285-64-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (CA INDEX NAME)

CM 1

CRN 145052-34-2

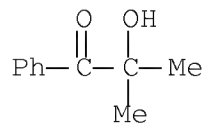
CMF C26 H35 O7 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



IC ICM C09D004-06

ICS C08F290-06; C08F290-14; C08F002-50; C03C025-10

CC 42-13 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 57  
 IT 947-19-3, Irgacure 184 41484-35-9, Irganox 1035 75980-60-8,  
 Lucirin TPO 149260-52-6, esacure kip 100f 174285-64-4,  
 Irgacure 1700  
 (optical fiber coating compns. contg. radiation-curable oligomer  
 and photoinitiator)  
 RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 26 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 133:254044 HCA Full-text

TI Photocurable ink composition and white ink for  
 ink jet recording and ink jet recording method

IN Tanabe, Seiichi; Takemoto, Kiyohiko

PA Seiko Epson Corporation, Japan

SO Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE         |
|--|------|----------|-----------------|--------------|
| -----  | ---- | -----    | -----           |              |
| EP 1036831   | A1   | 20000920 | EP 2000-302099  | 200003<br>15 |
| EP 1036831   | B1   | 20040728 |                 |              |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, SI, LT, LV, FI, RO |      |          |                 |              |
| US 6433038   | B1   | 20020813 | US 2000-525297  | 200003<br>14 |
| JP 2000336295  | A    | 20001205 | JP 2000-72239   | 200003<br>15 |
| AT 272098  | T    | 20040815 | AT 2000-302099  | 200003<br>15 |

PRAI JP 1999-69728 A 19990316

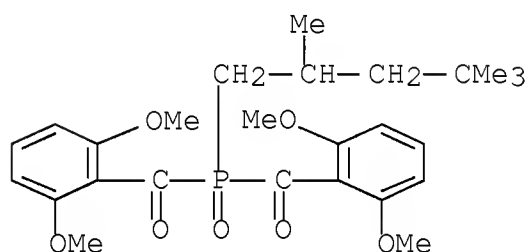
JP 1999-80470 A 19990324

AB The photocurable ink compn. can offer good coating strength, chem.  
 resistance, dispersion stability, and printing stability. This  
 photocurable ink compn. comprises at least a colorant (e.g. anatase  
 TiO<sub>2</sub>), a urethane oligomer, a monomer having a tri- or higher  
 functional reactive group, a photopolymn. initiator, and an aq.  
 solvent. An ink compn. contained aq. dispersion of TiO<sub>2</sub> (30%) 33,

NR-445 urethane oligomer 34, dipentaerythritol acrylate A-9530 1.5,  
 Irgacure 1700 initiator 1.5%, and the balance water.  
 IT 174285-64-4, Irgacure 1700  
 (initiator; in photocurable aq. ink compn. for images  
 with chem. resistance and excellent coating strength)  
 RN 174285-64-4 HCA  
 CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with  
 bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (CA  
 INDEX NAME)

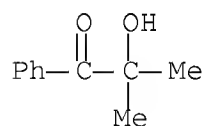
CM 1

CRN 145052-34-2  
 CMF C26 H35 O7 P



CM 2

CRN 7473-98-5  
 CMF C10 H12 O2



IC ICM C09D011-00  
 CC 42-12 (Coatings, Inks, and Related Products)  
 ST UV curable jet printing ink; urethane acrylate jet  
 printing ink  
 IT Polyurethanes, uses  
 (acrylates; in photocurable aq. ink compn. for images  
 with chem. resistance and excellent coating strength)  
 IT Inks

(photocurable; photocurable aq. ink compn. for images with chem. resistance and excellent coating strength)

IT 295327-91-2P 295357-14-1P  
(in photocurable aq. ink compn. for images with chem. resistance and excellent coating strength)

IT 13463-67-7, Titania, uses  
(in photocurable aq. ink compn. for images with chem. resistance and excellent coating strength)

IT 174285-64-4, Irgacure 1700  
(initiator; in photocurable aq. ink compn. for images with chem. resistance and excellent coating strength)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 27 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 133:185557 HCA Full-text

TI Manufacture of transfer decalcomanias using ultraviolet cure ink and adhesive technology

IN De Bastiani, Norman P.

PA Chartpak, Inc., USA

SO PCT Int. Appl., 20 pp.  
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|---|------|----------|------------------|----------|
| -----   | ---- | -----    | -----            |          |
| WO 2000046644   | A1   | 20000810 | WO 2000-US2416   | 20000131 |
| W: CN, ID, IN, JP, KR<br>RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE |      |          |                  |          |
| US 6174634  | B1   | 20010116 | US 1999-244631   | 19990204 |
| TW 494068   | B    | 20020711 | TW 2000-89101445 | 20000128 |
| EP 1151354  | A1   | 20011107 | EP 2000-910030   | 20000131 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI                           |      |          |                  |          |
| JP 2002536213   | T    | 20021029 | JP 2000-597662   | 200001   |

CN 1125378

B

20031022

CN 2000-803449

31

200001

31

PRAI US 1999-244631

A

19990204

WO 2000-US2416

W

20000131

AB Conventional methods of manuf. of transfer decalcomanias utilizing traditional solvent evaporative ink and adhesive technol. are replaced by the present process utilizing UV cure inks and adhesive technol. to produce a better product in a simpler, less costly manufg. operation.

IT 174285-64-4, IRGACURE 1700

(photoinitiator in prepn. for UV curable ink for transfer decalcomanias)

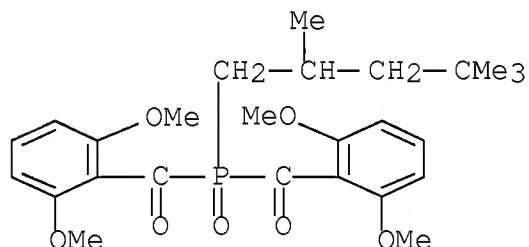
RN 174285-64-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with bis(2,6-dimethoxybenzoyl) (2,4,4-trimethylpentyl)phosphine oxide (CA INDEX NAME)

CM 1

CRN 145052-34-2

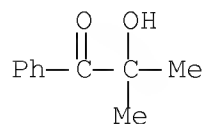
CMF C26 H35 O7 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



IC ICM G03G013-14  
ICS B32B015-04; B32B007-12

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38, 42

ST decalcomania UV curable ink adhesive

IT Polysiloxanes, uses  
(L 405; manuf. of transfer decalcomanias using UV curable ink contg., defoamer)

IT Decalcomanias  
(manuf. of transfer decalcomanias using UV cure ink and adhesive technol.)

IT Crosslinking  
(photochem.; manuf. of transfer decalcomanias using UV cure ink and adhesive technol.)

IT Adhesives  
(photocurable, pressure-sensitive; manuf. of transfer decalcomanias using UV cure ink and adhesive technol.)

IT Inks  
(printing, UV-curable; manuf. of transfer decalcomanias using UV cure ink and adhesive technol.)

IT 7631-86-9, Cabosil M-5, uses 288305-03-3, Ebecryl 6700-Ebecryl TRPG-DEO copolymer 288307-56-2, Ebecryl 1755-Ebecryl TRPGDA-DEO copolymer  
(manuf. of transfer decalcomanias using UV curable ink contg.)

IT 288307-79-9, Pennco 981 Black 288309-17-1, Pennco 9R52 Red  
(manuf. of transfer decalcomanias using UV curable ink contg., pigment)

IT 11114-17-3, FC430  
(manuf. of transfer decalcomanias using UV curable ink contg., surfactant)

IT 167748-98-3, P 115  
(manuf. of transfer decalcomanias using UV curable ink contg., synergist)

IT 288309-87-5, UV 12PS8K 288309-89-7, ML 2525-1  
(manuf. of transfer decalcomanias using UV cure ink and adhesive technol., UV pressure sensitive adhesives)

IT 71868-10-5, IRGACURE 907 174285-64-4, IRGACURE 1700  
(photoinitiator in prepn. for UV curable ink for transfer decalcomanias)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Ink-jet recording using two kinds of liquid solutions,  
images, and recording apparatus

IN Takemoto, Kiyohiko; Tanabe, Seiichi

PA Seiko Epson Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
|    | -----         | ---- | -----    | -----           |          |
| PI | JP 2000119574 | A    | 20000425 | JP 1998-295727  | 19981016 |

JP 3965802 B2 20070829

PRAI JP 1998-295727 19981016

AB The method involves applying (A) an ink. compn. contg. a coloring agent, an oligomer and/or a monomer, and an aq. solvent and (B) a reaction soln. contg. a polymn. initiator, a monomer or an oligomer, and an aq. soln. on recording media to obtain printing images, in which the compn. (the reaction soln.) contains the monomer, then the reaction soln. (the compn.) contains the oligomer, resp. The app. is also claimed. Good images with friction resistance are obtained by the method.

IT 174285-64-4, Irgacure 1700

(ink-jet printing using two kinds of crosslinkable liq.  
solns.)

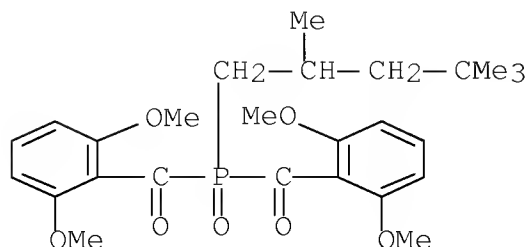
RN 174285-64-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with  
bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (CA  
INDEX NAME)

CM 1

CRN 145052-34-2

CMF C26 H35 O7 P

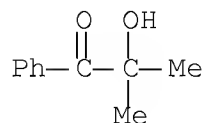




CM 2

CRN 7473-98-5

CMF C10 H12 O2



IC ICM C09D011-00  
ICS B41J002-01; B41M005-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 42

ST ink jet printing oligomer monomer crosslinking; UV  
radiation monomer curing ink jet printing

IT Ink-jet printers  
Ink-jet printing  
Polymerization catalysts  
UV radiation  
(ink-jet printing using two kinds of crosslinkable liq.  
solns.)

IT Hydrocarbon oils  
(ink-jet printing using two kinds of crosslinkable liq.  
solns.)

IT 947-19-3, Irgacure 184 71868-10-5, Irgacure 907 106797-53-9,  
Irgacure 2959 174285-64-4, Irgacure 1700  
(ink-jet printing using two kinds of crosslinkable liq.  
solns.)

IT 147-14-8, C.I. Pigment Blue 15:3 980-26-7, C.I. Pigment Red 122  
5117-12-4, Acryloylmorpholine 6358-31-2, C.I. Pigment Yellow 74  
13463-67-7, Titania, uses  
(ink-jet printing using two kinds of crosslinkable liq.  
solns.)

L56 ANSWER 29 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 132:229479 HCA Full-text

TI Laminated article having ink-containing surface bonded to  
second surface

IN Morrison, Eric D.; Li, Minyu; Tran, Bao; Trulsen, Marvin C.;

Gardner, James P., Jr.; Baker, James A.

PA Imation Corp., USA

SO PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
|    | -----         | ---- | -----    | -----           |          |
| PI | WO 2000016167 | A1   | 20000323 | WO 1999-US20743 | 19990909 |

W: JP, KR

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,  
NL, PT, SE

|    |            |   |          |                |          |
|----|------------|---|----------|----------------|----------|
| JP | 2002525656 | T | 20020813 | JP 2000-570642 | 19990909 |
|----|------------|---|----------|----------------|----------|

|      |                 |   |          |
|------|-----------------|---|----------|
| PRAI | US 1998-99993P  | P | 19980911 |
|      | WO 1999-US20743 | W | 19990909 |

AB A laminated article comprises an ink-bearing surface of a polymeric substrate adhesively bonded to a surface of a second polymeric substrate in which the peel strength between the substrates is at least 6 N/cm. The ink is an electrophotog. ink. In one aspect of the invention, the two substrates are different from each other.

IT 174285-64-4, Irgacure 1700  
(electrophotog. prints with toner images on polymer sheets and bonded to polymer protective films using photopolymerizable adhesive contg.)

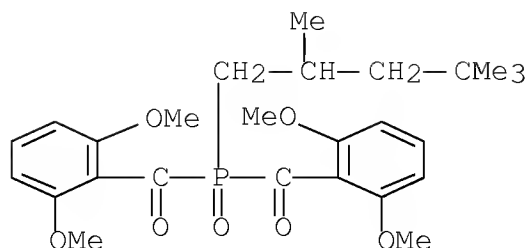
RN 174285-64-4 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with  
bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (CA  
INDEX NAME)

CM 1

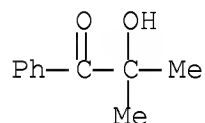
CRN 145052-34-2

CMF C26 H35 O7 P



CM 2

CRN 7473-98-5  
CMF C10 H12 O2

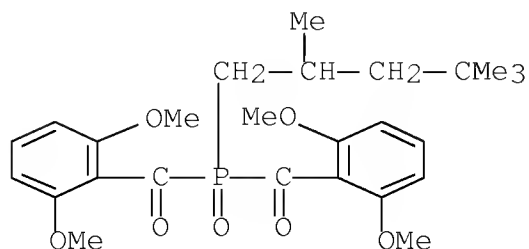


IC ICM G03G008-00  
ICS B41M007-00; B44F001-06  
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
IT Graphic arts  
(laminated articles with ink image-bearing polymer sheets bonded to polymer protective films for)  
IT 98572-96-4, Acrylic acid-2-isocyanatoethyl methacrylate copolymer  
163206-74-4, CN 966A80 174285-64-4, Irgacure 1700  
(electrophotog. prints with toner images on polymer sheets and bonded to polymer protective films using photopolymerizable adhesive contg.)  
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 30 OF 35 HCA COPYRIGHT 2008 ACS on STN  
AN 132:229478 HCA Full-text  
TI Laminated article having ink-containing surface bonded to second surface  
IN Gardner, James P., Jr.; Li, Minyu  
PA Imation Corp., USA  
SO PCT Int. Appl., 15 pp.  
CODEN: PIXXD2

DT Patent  
LA English  
FAN.CNT 1

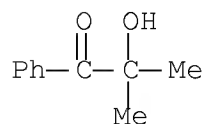
|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|------|---|------|----------|-----------------|--------------|
|      | -----   | ---- | -----    | -----           |              |
| PI   | WO 2000016166   | A1   | 20000323 | WO 1999-US20741 | 199909<br>09 |
|      | W: JP, KR   |      |          |                 |              |
|      | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,<br>NL, PT, SE   |      |          |                 |              |
|      | JP 2002525655   | T    | 20020813 | JP 2000-570641  | 199909<br>09 |
| PRAI | US 1998-100005P   | P    | 19980911 |                 |              |
|      | WO 1999-US20741   | W    | 19990909 |                 |              |
| AB   | A laminated article comprises an ink-bearing surface of a polymeric substrate bonded to a surface of a second polymeric substrate using a photopolymerizable adhesive in which the peel strength between the substrates is at least 6 N/cm. The laminated article may comprise a polymeric substrate containing transferred and fixed electrophotographic toner images and bonded with a polymeric film as a protective film. |      |          |                 |              |
| IT   | 174285-64-4, Irgacure 1700<br>(ink image-bearing polymer sheets bonded to polymer protective films using photopolymerizable adhesives containing.)  |      |          |                 |              |
| RN   | 174285-64-4 HCA   |      |          |                 |              |
| CN   | 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixed with bis(2,6-dimethoxybenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (CA INDEX NAME)   |      |          |                 |              |
| CM   | 1   |      |          |                 |              |
| CRN  | 145052-34-2   |      |          |                 |              |
| CMF  | C26 H35 O7 P  |      |          |                 |              |



CM 2

CRN 7473-98-5

CMF C10 H12 O2



IC ICM G03G008-00  
ICS B41M007-00; B44F001-06  
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST laminated article ink image protective film; electrophotog  
toner image receptor protective film  
IT Graphic arts  
(laminated articles comprising ink image-bearing  
polymer sheets bonded to polymer protective films using  
photopolymd. adhesives for)  
IT Adhesives  
(photopolymd.; for bonding polymer protective films to  
ink image-bearing polymer sheets)  
IT 26570-48-9 98572-96-4, Acrylic acid-2-isocyanatoethyl methacrylate  
copolymer 163206-74-4, CN 966A80 174285-64-4, Irgacure  
1700  
(ink image-bearing polymer sheets bonded to polymer  
protective films using photopolymerizable adhesives contg.)  
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 31 OF 35 HCA COPYRIGHT 2008 ACS on STN  
AN 130:6577 HCA Full-text  
TI Ribbon assemblies having the functional capability of providing  
break-out of color-coded coated optical fibers by virtue of a  
coating with a UV-curable ink  
IN Zahora, Edward Paul; Murphy, Edward Joseph; Szum, David Michael; Van  
den Burg, Johannes Cornelis  
PA Dsm N.V., Neth.  
SO PCT Int. Appl., 69 pp.  
CODEN: PIXXD2  
DT Patent  
LA English

FAN.CNT 1

|      | PATENT NO.<br>-----  | KIND<br>---- | DATE<br>----- | APPLICATION NO.<br>----- | DATE         |
|------|--|--------------|---------------|--------------------------|--------------|
| PI   | WO 9850317   | A1           | 19981112      | WO 1998-NL254            | 199805<br>06 |
|      | W: AU, BR, CA, CN, ID, JP, KR<br>RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,<br>NL, PT, SE   |              |               |                          |              |
|      | AU 9874573   | A            | 19981127      | AU 1998-74573            | 199805<br>06 |
|      | EP 980343  | A1           | 20000223      | EP 1998-921919           | 199805<br>06 |
|      | EP 980343  | B1           | 20060201      |                          |              |
|      | R: DE, FR, GB, IT, NL  |              |               |                          |              |
|      | BR 9808751   | A            | 20000711      | BR 1998-8751             | 199805<br>06 |
|      | JP 2001524223  | T            | 20011127      | JP 1998-547939           | 199805<br>06 |
|      | EP 1408017   | A2           | 20040414      | EP 2003-78781            | 199805<br>06 |
|      | EP 1408017   | A3           | 20060111      |                          |              |
|      | R: DE, FR, GB, IT, NL, LT, LV, MK, AL  |              |               |                          |              |
|      | CN 1644637   | A            | 20050727      | CN 2004-10005378         | 199805<br>06 |
|      | IN 1998MA01060   | A            | 20060929      | IN 1998-MA1060           | 199805<br>18 |
|      | TW 387005  | B            | 20000411      | TW 1998-87111361         | 199807<br>13 |
| PRAI | US 1997-45746P   | P            | 19970506      |                          |              |
|      | NL 1997-1007933  | A            | 19971230      |                          |              |
|      | EP 1998-921919   | A3           | 19980506      |                          |              |
|      | WO 1998-NL254  | W            | 19980506      |                          |              |
| OS   | MARPAT 130:6577  |              |               |                          |              |
| AB   | The monomers, oligomers, pigment, and photoinitiator for forming the<br>colored coating on the optical fibers contained in the ribbon<br>assemblies are selected to provide an av. percentage of reacted<br>acrylate unsatn. which provides a level of adhesion between a matrix |              |               |                          |              |

material and a colored coating that is less than a level of adhesion between the colored coating and the coated optical optical fiber to provide break-out of the color coded optical optical fiber from the ribbon assemblies. The photoinitiator has general formula

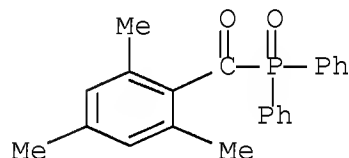
$\text{Ar1C1(O)P(O)(Ar3)C2(O)Ar2}$  ( $\text{Ar1-3} = \text{C compd contg. } \geq 1 \text{ arom. functional groups and are capable of forming free radicals upon exposure to UV}$   $\text{Ar1C1O}^*$ ;  $\text{Ar2C2O}^*$ , and  $\text{Ar3PO}^*$ ). The coatings have high curing speed, and the ribbon assemblies have the functional capability of providing break-out of color-coded coated optical fibers. A compn. consisting of CN120 (ethoxy diacrylate monomer) 42.85, Ebecryl 264 (aliph. urethane diacrylate oligomer) 25.25, pentaerythritol tetraacrylate 12.55, 1,6-hexanediol diacrylate 1.68, isobornyl acrylate 3.88, phenoxyethyl acrylate 3.88, butylhydroxytoluene 0.52, benzophenone 8.33, and 2-methyl-1-[4-(methylthio)-phenyl]-2-(4-morpholinyl)-1-propanone 1.04 wt.% was mixed with 4% Irgacure 819, and the resulting UV-curable compn. mixed with 9 wt.% blue and 3 wt.% white pigment.

IT 75980-60-8, Lucirin TPO

(for color-coding optical fibers, for providing break-out from ribbon assemblies)

RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)

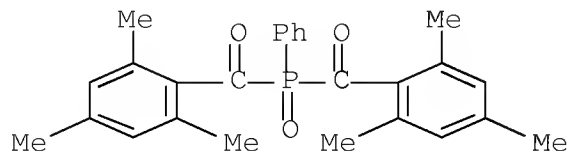


IT 162881-26-7, Irgacure 819

(photocatalyst, UV-curable inks contg. pigments and; for color-coding optical fibers, for providing break-out from ribbon assemblies)

RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinyldiene)bis[1-(2,4,6-trimethylphenyl)- (CA INDEX NAME)



IC ICM C03C025-02  
ICS G02B006-44; C09D011-10

CC 57-1 (Ceramics)

ST optical fiber color code copolymer coating; UV curable coating pigment optical fiber; ribbon optical fiber coating; acrylic polymer coating optical fiber; CN120 ethoxy diacrylate copolymer; Ebecryl 264 aliph urethane diacrylate oligomer copolymer; pentaerythritol tetraacrylate copolymer; hexanediol diacrylate copolymer; isobornyl acrylate copolymer; phenoxyethyl acrylate copolymer; trimethylolpropane triacrylate copolymer; vinylcaprolactam copolymer; hydroxyethyl acrylate copolymer; Irgacure photocatalyst copolymer; Lucirin TPO trimethylbenzoyldiphenylphosphine oxide photocatalyst; epoxy resin acrylate polysiloxane copolymer; polyether acrylic polyurethane copolymer

IT Bands and Ribbons  
(UV-curable acrylate-based ink compns. for providing break-out of color-coded coated optical fibers from)

IT Lubricants  
(UV-curable inks contg. pigments and; for color-coding optical fibers, for providing break-out from ribbon assemblies)

IT Pigments, nonbiological  
(UV-curable inks contg.; for color-coding optical fibers, for providing break-out from ribbon assemblies)

IT Coating materials  
(UV-curable, inks, acrylate-based; for providing break-out of color-coded coated optical fibers from ribbon assemblies)

IT Epoxy resins, uses  
(acrylates, polymers, with acrylates, UV-curable inks contg.; for providing break-out of color-coded coated optical fibers from ribbon assemblies)

IT Polysiloxanes, uses  
(acrylic, polymers with acrylates, UV-curable inks contg.; for providing break-out of color-coded coated optical fibers from ribbon assemblies)

IT Polyurethanes, uses  
Polyurethanes, uses  
(acrylic-polyether-, polymers with ethoxylated bisphenol-A diacrylate and trimethylolpropane triacrylate and N-vinylcaprolactam, UV-curable inks contg.; for providing break-out of color-coded coated optical fibers from ribbon assemblies)

IT Polyethers, uses



Polyethers, uses  
 (acrylic-polyurethane-, polymers with ethoxylated bisphenol-A diacrylate and trimethylolpropane triacrylate and N-vinylcaprolactam, UV-curable inks contg.; for providing break-out of color-coded coated optical fibers from ribbon assemblies)

IT Optical fibers  
 (color-coding of; with acrylate-based UV-curable ink, for providing break-out from ribbon assemblies)

IT Polyoxyalkylenes, uses  
 (di-Me polysiloxane-, polymers with Ebecryl 3700, UV-curable inks contg.; for providing break-out of color-coded coated optical fibers from ribbon assemblies)

IT Polysiloxanes, uses  
 Polysiloxanes, uses  
 (di-Me, polyoxyalkylene-, polymers with Ebecryl 3700, UV-curable inks contg.; for providing break-out of color-coded coated optical fibers from ribbon assemblies)

IT Catalysts  
 (photochem., homolytic, UV-curable inks contg. pigments and; for color-coding optical fibers, for providing break-out from ribbon assemblies)

IT Inks  
 (photocurable, acrylate-based; for color-coding optical fibers, for providing break-out from ribbon assemblies)

IT Acrylic polymers, uses  
 (polysiloxane-, polymers with acrylates, UV-curable inks contg.; for providing break-out of color-coded coated optical fibers from ribbon assemblies)

IT 119-61-9, Benzophenone, uses 128-37-0, 2,6-Di-tert-butyl-methylphenol, uses  
 (UV-curable inks contg. pigments and; for color-coding optical fibers, for providing break-out from ribbon assemblies)

IT 818-61-1D, polymers with polyether-polyurethanes and ethoxylated bisphenol-A diacrylate and trimethylolpropane triacrylate 2235-00-9D, N-Vinylcaprolactam, polymers with acrylic-polyurethane-polyethers and ethoxylated bisphenol-A diacrylate and trimethylolpropane triacrylate 15625-89-5D, Trimethylolpropane triacrylate, polymers with acrylic-polyurethane-polyethers and ethoxylated bisphenol-A diacrylate and N-vinylcaprolactam 64401-02-1D, polymers with acrylic-polyurethane-polyethers and trimethylolpropane triacrylate and N-vinylcaprolactam  
 (UV-curable inks contg.; for providing break-out of color-coded coated optical fibers from ribbon assemblies)

IT 119-61-9D, Benzophenone, acrylated, polymers with CN 120 and Ebecryl

264 and 1,6-hexanediol diacrylate and isobornyl acrylate and pentaerythritol tetraacrylate and phenoxyethyl acrylate and silicone diacrylate 4687-94-9D, Ebecryl 3700, polymers with alkoxyated aliph. diacrylates 4986-89-4D, Pentaerythritol tetraacrylate, polymers with acrylated benzophenone and CN 120 and Ebecryl 264 and 1,6-hexanediol diacrylate and isobornyl acrylate and phenoxyethyl acrylate and silicone diacrylate 5888-33-5D, Isobornyl acrylate, polymers with acrylated benzophenone and CN 120 and Ebecryl 264 and 1,6-hexanediol diacrylate and pentaerythritol tetraacrylate and phenoxyethyl acrylate and silicone diacrylate 13048-33-4D, 1,6-Hexanediol diacrylate, polymers with acrylated benzophenone and CN 120 and Ebecryl 264 and isobornyl acrylate and pentaerythritol tetraacrylate and phenoxyethyl acrylate and silicone diacrylate 48145-04-6D, Phenoxyethyl acrylate, polymers with acrylated benzophenone and CN 120 and Ebecryl 264 and 1,6-hexanediol diacrylate and isobornyl acrylate and pentaerythritol tetraacrylate and silicone diacrylate 102641-25-8D, Ebecryl 264, polymers with acrylated benzophenone and CN-120 and 1,6-hexanediol diacrylate and isobornyl acrylate and pentaerythritol tetraacrylate and phenoxyethyl acrylate and silicone diacrylate 215871-51-5

(UV-curable inks contg.; for providing break-out of color-coded coated optical fibers from ribbon assemblies)

IT 75980-60-8, Lucirin TPO

(for color-coding optical fibers, for providing break-out from ribbon assemblies)

IT 71868-10-5, Irgacure 907 162831-26-7, Irgacure 819

(photocatalyst, UV-curable inks contg. pigments and; for color-coding optical fibers, for providing break-out from ribbon assemblies)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 32 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 129:331557 HCA Full-text

TI Energy beam-curable compositions and their cured products with good gloss and curability

IN Taniguchi, Nobuo; Ozaki, Toru; Yokoshima, Minoru

PA Nippon Kayaku Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

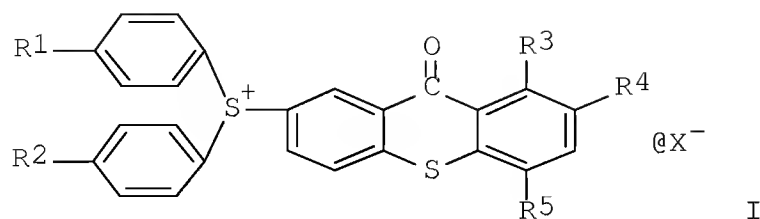
| PATENT NO. | KIND | DATE  | APPLICATION NO. | DATE |
|------------|------|-------|-----------------|------|
| -----      | ---- | ----- | -----           |      |
| -----      |      |       |                 |      |

PI JP 10279616 A 19981020 JP 1997-102403

199704  
07

PRAI JP 1997-102403 19970407

GI

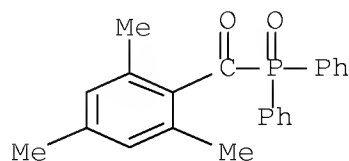


AB Title compns., useful for inks, coatings, adhesives, etc., comprise (A) cationically polymerizable substances, (B) sulfonium salts [max. molar absorption coeff. (MMA; in wavelength 360-500 nm)  $\geq 100$ ], and (C) photo-radical polymn. initiators. Cured products are obtained from the above compns. Articles having coatings from the cured products are also claimed. Thus, a compn. contg. 3,4-epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate 84, I (R1, R2 = F, R3, R5 = H, R4 = iso-Pr, X = PF6) 3, 2,4,6-trimethylbenzoyl-diphenylphosphine oxide 1, TiO<sub>2</sub> 100, Vylon 200 (polyester) 10, and L 7604 0.4 part, was applied on an Al plate and cured by UV irradiation to give a cured film with high gloss and rapid curability.

IT 75980-60-8, 2,4,6-Trimethylbenzoyl-diphenylphosphine oxide (photo-radical polymn. catalyst; energy beam-curable compns. contg. cationically polymerizable monomers and sulfonium salts and photo-radical polymn. initiators for glossy cured products)

RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



IC ICM C08F002-50  
ICS C08G059-68; C09D005-00

CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 42

IT Coating materials  
(UV-curable; energy beam-curable compns. contg. cationically polymerizable monomers and sulfonium salts and photo-radical polymn. initiators for glossy cured products)

IT Polymerization catalysts  
(cationic, photo-, sulfonium salts; energy beam-curable compns. contg. cationically polymerizable monomers and sulfonium salts and photo-radical polymn. initiators for glossy cured products)

IT Pigments, nonbiological  
(energy beam-curable compns. contg. cationically polymerizable monomers and sulfonium salts and photo-radical polymn. initiators for glossy cured products)

IT Polymerization catalysts  
(radical, photo-; energy beam-curable compns. contg. cationically polymerizable monomers and sulfonium salts and photo-radical polymn. initiators for glossy cured products)

IT 25085-98-7P, 3,4-Epoxy cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate homopolymer 53895-45-7P, Bisphenol A diglycidyl ether-3,4-epoxy cyclohexylmethyl 3,4-epoxycyclohexanecarboxylate copolymer  
(energy beam-curable compns. contg. cationically polymerizable monomers and sulfonium salts and photo-radical polymn. initiators for glossy cured products)

IT 200132-32-7 206556-95-8 206557-66-6  
(photo-cationic polymn. catalyst; energy beam-curable compns. contg. cationically polymerizable monomers and sulfonium salts and photo-radical polymn. initiators for glossy cured products)

IT 75980-60-8, 2,4,6-Trimethylbenzoyl-diphenylphosphine oxide  
(photo-radical polymn. catalyst; energy beam-curable compns. contg. cationically polymerizable monomers and sulfonium salts and photo-radical polymn. initiators for glossy cured products)

IT 13463-67-7, Titanium dioxide, properties  
(pigment; energy beam-curable compns. contg. cationically polymerizable monomers and sulfonium salts and photo-radical polymn. initiators for glossy cured products)

AN 127:249523 HCA Full-text  
 TI Cationic acrylic resin compositions for ink acceptors and  
 recording materials using them  
 IN Noguchi, Hiromichi; Nishioka, Hiroko; Hikuma, Masahiko; Moriya,  
 Kenichi; Katayama, Masato; Tochiwara, Shinichi; Inamoto, Tadayoshi  
 PA Canon K. K., Japan; Canon Inc.  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

|    | PATENT NO.<br>-----<br>----- | KIND<br>---- | DATE<br>----- | APPLICATION NO.<br>----- | DATE         |
|----|------------------------------|--------------|---------------|--------------------------|--------------|
| PI | JP 09208853                  | A            | 19970812      | JP 1996-35768            | 199601<br>31 |

JP 3647125 B2 20050511  
 PRAI JP 1996-35768 19960131  
 AB Title compns. contain Z1(OR1A)(OR2K)(OR3A)OR4X and/or  
 Z2(OR5K)(OR6A)OR7A [Z1, Z2 = aliph. polyhydric alc. residue, aliph.  
 group; R1-R7 = ethylene oxide chains; amt. of the chains in R1-R4 is  
 9-50; amt. of the chains in R5-R7 is 9-50; K = NMe3+, NEt3+,  
 NMe(CH2CH2OH)2+, NH(CH2CH2O)2+, N(CH2CH2O)3+; K is assocd. with  
 counter anion; A = CH2:CHCO2, CH2:CMeco2; X = A, K] and water-insol.  
 hydrophilic polymers contg. acrylamide-type monomers 20-60, acrylate  
 esters having ethylene glycol on the side chains 10-35, and alkyl  
 acrylates 15-40%. The compns. are applied on substrates and polymd.  
 to form solid coatings as ink acceptors. Ink jet printing acceptors  
 having the above coatings of 5-50  $\mu$ m thickness are also claimed.  
 Thus, 80 parts HCl salt of poly(ethylene oxide) pentaerythritol ether  
 tetraglycidyl ether diacrylate cationized by Me3N, 20 part-solids  
 50:35:15 N,N-dimethylaminoacrylamide-Blemmer PE 90 (polyethylene  
 glycol monomethacrylate)-Me methacrylate copolymer soln., and 3.0  
 parts Irgacure 2959 (photopolymn. initiator) were mixed to give title  
 compn., which was applied on a PET film, dried at 70° for 3 min, and  
 UV-cured. Then, the film was impregnated with an aq. soln. of a jet  
 printing ink for 60 s, washed by water, and dried to give a  
 transparent dyed test piece showing no elution of the dye nor peeling  
 off of the coating in further immersing in water.

IT 189750-87-6, CGI 1700  
 (photopolymn. initiators; in jet printing ink-accepting  
 coating layer contg. cationic acrylic polymers and water-insol.  
 hydrophilic acrylic polymers)

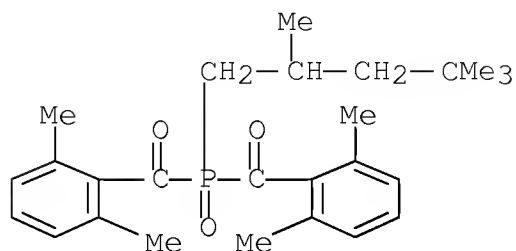
RN 189750-87-6 HCA  
 CN 1-Propanone, 2-hydroxy-2-methyl-1-phenyl-, mixt. with  
 bis(2,6-dimethylbenzoyl)(2,4,4-trimethylpentyl)phosphine oxide (9CI)

(CA INDEX NAME)

CM 1

CRN 151250-02-1

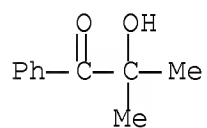
CMF C26 H35 O3 P



CM 2

CRN 7473-98-5

CMF C10 H12 O2



IC ICM C09D004-06  
ICS B05D005-04; B41M005-00; D06P005-00; D21H019-24; D21H027-00  
CC 42-12 (Coatings, Inks, and Related Products)  
ST cationic acrylic polymer printing ink acceptor; jet  
printing ink acceptor; water insol hydrophilic polymer  
ink acceptor  
IT Polymer blends  
(jet printing ink-accepting coating layer contg.  
cationic acrylic polymers and water-insol. hydrophilic acrylic  
polymers)  
IT Inks  
(jet-printing; jet printing ink-accepting coating layer  
contg. cationic acrylic polymers and water-insol. hydrophilic  
acrylic polymers)  
IT Polymerization catalysts

(photopolymn.; in jet printing ink-accepting coating layer contg. cationic acrylic polymers and water-insol. hydrophilic acrylic polymers)

IT Quaternary ammonium compounds, uses  
(polymers; in jet printing ink-accepting coating layer contg. cationic acrylic polymers and water-insol. hydrophilic acrylic polymers)

IT Pigments, nonbiological  
(white; in jet printing ink-accepting coating layer contg. cationic acrylic polymers and water-insol. hydrophilic acrylic polymers)

IT 13463-67-7, Titanium oxide (TiO<sub>2</sub>), uses  
(CR 50, white pigments; in jet printing ink-accepting coating layer contg. cationic acrylic polymers and water-insol. hydrophilic acrylic polymers)

IT 75-50-3DP, Trimethylamine, reaction product with poly(ethylene oxide) pentaerythritol ether tetraglycidyl ether diacrylate  
111-42-2DP, Diethanolamine, reaction product with poly(ethylene oxide) trimethylolpropane ether acrylate diglycidyl ether  
3327-22-8DP, 3-Chloro-2-hydroxypropyltrimethylammonium chloride, reaction product with poly(ethylene oxide) glycerin ether diacrylate  
195603-17-9DP, reaction products with trimethylamine, hydrochloric acid salt 195603-19-1DP, reaction products with 3-chloro-2-hydroxypropyltrimethylammonium chloride, lactate  
195603-20-4DP, reaction product with diethanolamine, hydrochloric acid salt  
(coatings; jet printing ink-accepting coating layer contg. cationic acrylic polymers and water-insol. hydrophilic acrylic polymers)

IT 195373-83-2P 195373-84-3P 195373-85-4P 195603-22-6P  
(hydrophilic; jet printing ink-accepting coating layer contg. cationic acrylic polymers and water-insol. hydrophilic acrylic polymers)

IT 947-19-3, Irgacure 184 106797-53-9, Irgacure 2959  
189750-87-6, CGI 1700  
(photopolymn. initiators; in jet printing ink-accepting coating layer contg. cationic acrylic polymers and water-insol. hydrophilic acrylic polymers)

L56 ANSWER 34 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 125:329757 HCA Full-text

TI Photopolymerization initiator compositions containing 4,4'-bis(diethylamino)benzophenone and odorless photocurable coatings

IN Kameoka, Katsuyoshi; Hasegawa, Hideki

PA Toyo Ink Mfg Co, Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent  
LA Japanese  
FAN.CNT 1

|    | PATENT NO.<br>-----<br>----- | KIND<br>---- | DATE<br>----- | APPLICATION NO.<br>----- | DATE         |
|----|------------------------------|--------------|---------------|--------------------------|--------------|
| PI | JP 08217814                  | A            | 19960827      | JP 1995-29269            | 199502<br>17 |

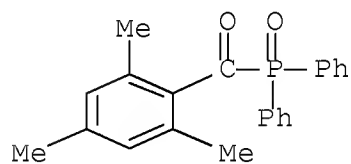
PRAI JP 1995-29269 19950217

AB Title compns. comprise photopolymn. initiators with mol. wt.  $\geq 300$  and 4,4'-bis(diethylamino)benzophenone (I). The photocurable compns. contain compds. having radically polymerizable double bond and 0.1-20% the initiator compns. contg. I as sensitizer, which do not release odor during or after printing process. Thus, an ink of 36 parts a vanish of Kayarad DPHA (II, polyfunctional monomer), hydroquinone, and DT 150 (diacryl phthalate), 18 parts Lionol Blue FG 7330 (pigment), 30 parts II, 10 parts Kayarad PET-40 (monofunctional monomer), 4 parts Esacure KIP (oligomeric initiator), and 2 parts I was printed on a paper and UV-irradiated to be cured without odor.

IT 75980-60-8, Lucirin TPO  
(initiators; odorless radically polymerizable compns. contg. high-mol. initiators and bis(diethylamino)benzophenone as sensitizers)

RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



IC ICM C08F002-50

ICS C09D004-00; C09D005-00

CC 35-3 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 42

ST photopolymn initiator bisdiethylaminobenzophenone sensitizer; high mol photopolymn initiator sensitizer; odorless photopolymerizable compn initiator sensitizer; radical photopolymerizable coating initiator sensitizer; ink radical photopolymerizable initiator sensitizer



IT Coating materials  
 (odorless radically polymerizable compns. contg.  
 high-mol. initiators and bis(diethylamino)benzophenone as  
 sensitizers for)

IT Polymerization catalysts  
 (photochem., odorless radically polymerizable compns.  
 contg. high-mol. initiators and bis(diethylamino)benzophenone as  
 sensitizers)

IT Inks  
 (printing, odorless radically polymerizable compns.  
 contg. high-mol. initiators and bis(diethylamino)benzophenone as  
 sensitizers for)

IT 69673-80-9, 1-(4-Dodecylphenyl)-2-hydroxy-2-methylpropan-1-one  
 75980-60-3, Lucirin TPO 119313-12-1, Irgacure 369  
 133927-86-3, Esacure KIP 182683-80-3  
 (initiators; odorless radically polymerizable compns.  
 contg. high-mol. initiators and bis(diethylamino)benzophenone as  
 sensitizers)

IT 90-93-7, 4,4'-Bis(diethylamino)benzophenone  
 (odorless radically polymerizable compns. contg.  
 high-mol. initiators and bis(diethylamino)benzophenone as  
 sensitizers)

IT 183386-80-3P  
 (odorless radically polymerizable compns. contg.  
 high-mol. initiators and bis(diethylamino)benzophenone as  
 sensitizers)

L56 ANSWER 35 OF 35 HCA COPYRIGHT 2008 ACS on STN

AN 123:343737 HCA Full-text

TI UV-curable screen-printing ink compositions and  
 their cured products

IN Yokoshima, Minoru

PA Nippon Kayaku Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

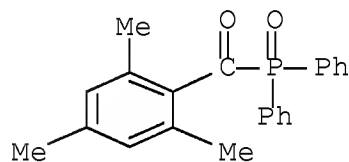
|      | PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE         |
|------|---|------|----------|-----------------|--------------|
|      | -----   | ---- | -----    | -----           |              |
|      | -----   |      |          |                 |              |
| PI   | JP 07157705   | A    | 19950620 | JP 1993-340280  | 199312<br>08 |
| PRAI | JP 1993-340280  |      | 19931208 |                 |              |
| AB   | The compns. comprise urethane (meth)acrylates, vinyl ether compds.,<br>cationic photoinitiators, and radical photoinitiators. Thus, a |      |          |                 |              |

polyester diol (neopentyl glycol-adipic acid copolymer) 230, polytetramethylene glycol 244.8, and isophorone diisocyanate 200 parts were treated at 75° for 10 h and further treated with 68.7 parts 2-hydroxyethyl acrylate at 75-80° in the presence of metoquinone and dibutyltin dilaurate to give a urethane acrylate, 35 parts of which was blended with triethylene glycol divinyl ether 20, tetraethylene glycol divinyl ether 15, bis[4-(diphenylsulfonio)phenyl] sulfide bis(hexafluoroantimonate) 1.5, 2,4,6-trimethylbenzoyldiphenylphosphine oxide 1.5, and TiO<sub>2</sub> 30 parts to give an ink with no gelation after 30-day storage at 70°. It was screen-printed on a polycarbonate substrate and irradiated with UV to give a cured product showing good adhesion and no discoloration after 24-h leaving at 90°.

IT 75980-60-3, 2,4,6-Trimethylbenzoyldiphenylphosphine oxide  
(catalysts, for radical photopolymn.; UV  
-curable screen-printing ink compns. based on urethane  
(meth)acrylates with good storage stability)

RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX  
NAME)



IC ICM C09D011-10

ICS C08F290-06

CC 42-12 (Coatings, Inks, and Related Products)

ST UV curable ink urethane acrylate; storage  
stability ink urethane acrylate; discoloration resistance  
ink acrylic polyurethane

IT Inks  
(UV-curable screen-printing ink compns. based  
on urethane (meth)acrylates with good storage stability)

IT Urethane polymers, uses  
(acrylic-polyoxyalkylene-, UV-curable screen-printing  
ink compns. based on urethane (meth)acrylates with good  
storage stability)

IT Polyoxyalkylenes, uses  
(acrylic-polyurethane-, UV-curable screen-printing  
ink compns. based on urethane (meth)acrylates with good  
storage stability)

IT Polymerization catalysts  
(cationic, photochem., UV-curable screen-printing  
ink compns. based on urethane (meth)acrylates with good  
storage stability)

IT Urethane polymers, uses  
(polyester-polyoxyalkylene-, acrylic; UV-curable  
screen-printing ink compns. based on urethane  
(meth)acrylates with good storage stability)

IT Polymerization catalysts  
(radical, photochem., UV-curable  
screen-printing ink compns. based on urethane  
(meth)acrylates with good storage stability)

IT 169224-68-4P 170516-73-1P 170720-07-7P 170900-21-7P  
(UV-curable screen-printing ink compns. based  
on urethane (meth)acrylates with good storage stability)

IT 89452-37-9, Bis[4-(diphenylsulfonio)phenyl] sulfide  
bis(hexafluoroantimonate)  
(catalysts, for cationic photopolymn.; UV-curable  
screen-printing ink compns. based on urethane  
(meth)acrylates with good storage stability)

IT 75980-60-8, 2,4,6-Trimethylbenzoyldiphenylphosphine oxide  
(catalysts, for radical photopolymn.; UV  
-curable screen-printing ink compns. based on urethane  
(meth)acrylates with good storage stability)

=> D L57 20,40,60,80 BIB ABS HITSTR HITIND

L57 ANSWER 20 OF 81 HCA COPYRIGHT 2008 ACS on STN  
AN 147:128994 HCA Full-text  
TI Solder resist ink composition containing alicyclic epoxy  
compound, hardened solder resist, and manufacture of the solder  
resist

IN Oga, Kazuhiko  
PA Showa Denko K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 41pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese  
FAN.CNT 1

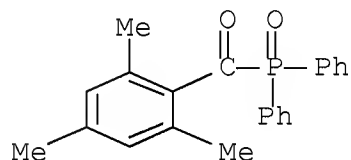
|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE   |
|------|----------------|------|----------|-----------------|--------|
|      | -----          | ---- | -----    | -----           |        |
| PI   | JP 2007171812  | A    | 20070705 | JP 2005-372439  | 200512 |
|      |                |      |          |                 | 26     |
| PRAI | JP 2005-372439 |      | 20051226 |                 |        |

AB Disclosed is a solder resist ink compn. comprising (a) a radical polymerizable compd. having carboxy group, (b) a compd. which is solid at 40° and has an alicyclic structure and  $\geq 2$  epoxy groups, and (c) a solvent.

IT 75980-60-8, Lucirin TPO 162881-26-7, Irgacure 819  
(photopolymn. initiator; Solder resist ink compn. contg. alicyclic epoxy compd.)

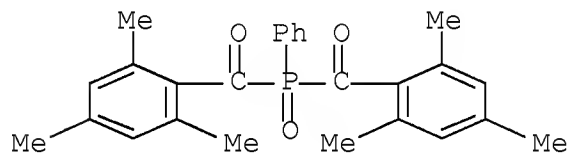
RN 75980-60-8 HCA

CN Methanone, (diphenylphosphinyl)(2,4,6-trimethylphenyl)- (CA INDEX NAME)



RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)- (CA INDEX NAME)]



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38, 76

ST solder resist ink compn alicyclic epoxy compd

IT Solder resists  
(Solder resist ink compn. contg. alicyclic epoxy compd.)

IT Polymerization catalysts  
(photopolymn.; Solder resist ink compn. contg. alicyclic epoxy compd.)

IT 112-15-2, Ethylcarbitol acetate 25085-99-8D, Bisphenol a diglycidyl ether homopolymer, reaction product with COOH-contg. compd. 96141-20-7D, reaction product with COOH-contg. compd.  
(Solder resist ink compn. contg. alicyclic epoxy

compd.)  
IT 90-93-7D, EAB-F, reaction product with carboxy-contg. radical  
polymerizable compd. 71868-10-5, Irgacure 907 75980-60-8  
, Lucirin TPO 82799-44-8, Kayacure DETX-S 119313-12-1, Irgacure  
369 162881-26-7, Irgacure 819  
(photopolymn. initiator; Solder resist ink compn.  
contg. alicyclic epoxy compd.)

L57 ANSWER 40 OF 81 HCA COPYRIGHT 2008 ACS on STN  
AN 145:250913 HCA Full-text  
TI Uv curable printing ink composition suitable for transfer  
printing  
IN Wu, Weixin; Zhu, Baoyin; Zhang, Hong; Ye, Fei; Zhang, Dingde  
PA Shenzhen Pinefield Chemical Enterprises Co., Ltd., Peop. Rep. China  
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 21 pp.  
CODEN: CNXXEV

DT Patent  
LA Chinese

FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO.  | DATE         |
|----|------------|------|----------|------------------|--------------|
|    | -----      | ---- | -----    | -----            |              |
|    | -----      |      |          |                  |              |
| PI | CN 1800274 | A    | 20060712 | CN 2004-10102930 | 200412<br>31 |

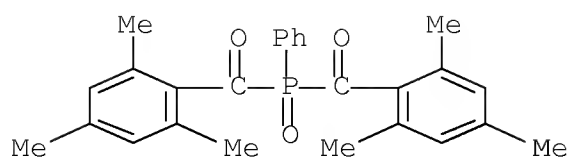
PRAI CN 2004-10102930 20041231

AB The title compn. contains (by wt. parts) at least one polyurethane  
methacrylate oligomer with at least four methacrylate functional  
groups 20-90, photoinitiator 1-15 and reactive diluent 10-85,  
optionally coloring pigment, filler, leveling agent, binder and  
processing additives. The photoinitiator is a mixt. of acylphosphine  
oxide type photoinitiator and  $\alpha$ -hydroxyketone type photoinitiator,  
and the reactive diluent is selected from one or more of  
trimethylolpropane triacrylate, trimethylolpropane trimethacrylate,  
etc. The printing ink compn. has good UV curing property, and can be  
used in electronic products and household appliances requiring wear  
and chem. resistances such as mobile phones, appliances, etc.

IT 162881-26-7, Irgacure 819  
(Uv-curable printing ink compn. suitable for transfer  
printing)

RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinylidene)bis[1-(2,4,6-trimethylphenyl)-  
(CA INDEX NAME)]



- CC 42-12 (Coatings, Inks, and Related Products)
- ST UV curable transfer printing ink compn
- IT Carbon black, uses  
(UV-curable printing ink compn. suitable for transfer printing)
- IT Polyurethanes, uses  
(acrylates; UV-curable printing ink compn. suitable for transfer printing)
- IT Amides, uses  
(aryl; UV-curable printing ink compn. suitable for transfer printing)
- IT Inks  
(printing, transfer; UV-curable printing ink compn. suitable for transfer printing)
- IT 167858-10-8P 905985-10-6P  
(UV-curable printing ink compn. suitable for transfer printing)
- IT 947-19-3, Irgacure 184 3290-92-4, Trimethylolpropane trimethacrylate 3524-66-1, Pentaerythritol trimethacrylate 3524-68-3, Pentaerythritol triacrylate 9016-00-6, Polydimethylsiloxane 13048-33-4, 1,6-Hexanediol diacrylate 15625-89-5, Trimethylolpropane triacrylate 28961-43-5, Ethoxylated trimethylolpropane triacrylate 29570-58-9, Dipentaerythritol hexaacrylate 31900-57-9, Polydimethylsiloxane 53879-54-2, Propoxylated trimethylolpropane triacrylate 53879-55-3, Propoxylated pentaerythritol tetraacrylate 60506-81-2, Dipentaerythritol pentaacrylate 115452-84-1, Disperbyk 163  
(UV-curable printing ink compn. suitable for transfer printing)
- IT 147-14-8, Phthalocyanine blue 471-34-1, Calcium carbonate, uses 1321-67-1, Naphthol 1328-53-6, Phthalocyanine green 13463-67-7, Titania, uses  
(UV-curable printing ink compn. suitable for transfer printing)
- IT 162881-26-7, Irgacure 819  
(Uv-curable printing ink compn. suitable for transfer printing)

L57 ANSWER 60 OF 81 HCA COPYRIGHT 2008 ACS on STN  
 AN 142:221388 HCA Full-text  
 TI Steam sterilization-indicatory labels  
 IN Fukui, Hiroshi; Ueda, Shinsuke; Yamamoto, Tatsuo  
 PA Sekisui Chemical Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
|    | -----         | ---- | -----    | -----           |          |
| PI | JP 2005046367 | A    | 20050224 | JP 2003-282007  | 20030729 |

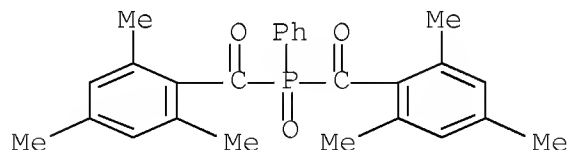
PRAI JP 2003-282007 20030729

AB Title labels, which are removed by steam sterilization, are adhesive labels printed with inks contg. polyoxyalkylenes or polyoxyalkylene segment-contg. polymers to indicate that not yet sterilization information. A paper-based adhesive lable was printed with medical informations, then with a white ink contg. MS polymer S 303 and Irgacure 819 to show sterilization necessity characters, bound on a glass container, and sterilized in an autoclave under 120° steam and 2 atm over 1 h to result a complete removal of the characters.

IT 162881-26-7, Irgacure 819  
 (adhesive labels printed with inks contg.  
 steam-removable polyoxyalkylene-contg. polymer binders for steam  
 sterilization indication)

RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinyldiene)bis[1-(2,4,6-trimethylphenyl)-  
 (CA INDEX NAME)



IC ICM A61L002-26  
 ICS A61L002-06; C09D011-10; C09J007-02; G09F003-02  
 CC 42-12 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 62  
 ST steam sterilization necessity indication adhesive label

polyoxyalkylene polymer ink

IT Medical goods  
 (adhesive labels for; adhesive labels printed with inks  
 contg. steam-removable polyoxyalkylene-contg. polymer binders for  
 steam sterilization indication)

IT Polyoxyalkylenes, uses  
 (adhesive labels printed with inks contg.  
 steam-removable polyoxyalkylene-contg. polymer binders for steam  
 sterilization indication)

IT Labels  
 (adhesive; adhesive labels printed with inks contg.  
 steam-removable polyoxyalkylene-contg. polymer binders for steam  
 sterilization indication)

IT Peroxides, uses  
 (org.; adhesive labels printed with inks contg.  
 steam-removable polyoxyalkylene-contg. polymer binders for steam  
 sterilization indication)

IT Sterilization and Disinfection  
 (steam; adhesive labels printed with inks contg.  
 steam-removable polyoxyalkylene-contg. polymer binders for steam  
 sterilization indication)

IT 162881-26-7, Irgacure 819  
 (adhesive labels printed with inks contg.  
 steam-removable polyoxyalkylene-contg. polymer binders for steam  
 sterilization indication)

IT 77396-40-8, MS polymer S 303  
 (adhesive labels printed with inks contg.  
 steam-removable polyoxyalkylene-contg. polymer binders for steam  
 sterilization indication)

L57 ANSWER 80 OF 81 HCA COPYRIGHT 2008 ACS on STN

AN 129:331507 HCA Full-text

TI Liquid radiation-curable resin compositions for use in optical fiber  
 coatings

IN Snowwhite, Paul Eugene; Bishop, Timothy Edward; Szum, David Michael;  
 Komiya, Zen; Ishikawa, Miyuki; Ukachi, Takashi

PA DSM N.V., Neth.; JSR Corporation

SO PCT Int. Appl., 82 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

|    | PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE   |
|----|------------|------|----------|-----------------|--------|
|    | -----      | ---- | -----    | -----           |        |
|    | -----      |      |          |                 |        |
| PI | WO 9847954 | A1   | 19981029 | WO 1998-NL220   | 199804 |



W: AU, BR, CA, CN, JP, KR

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,  
NL, PT, SE

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| EP 975693  | B2 | 20060118 |                |              |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, FI |    |          |                |              |
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OS MARPAT 129:331507

AB The compns. comprise (A) 10-90% of  $\geq 1$  radiation-curable oligomer, (B) 10-90% of  $\geq 1$  radiation-curable monomer diluent, and (C) an effective amt. of  $\geq 1$  bisbenzoylphosphine oxides  $\text{Ar}_2\text{C}(\text{O})\text{POAr}_1\text{C}(\text{O})\text{Ar}_3$  ( $\text{Ar}_1$ -3 are arom. groups which may have one or more substitution groups) as photoinitiators for improving curability and removability after curing. Thus, a liq. acrylic urethane was prepd. from the reaction

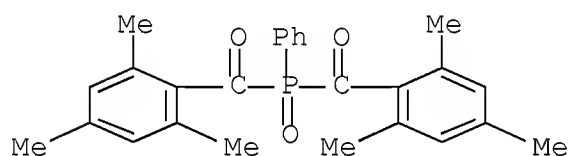
of TDI, tricyclodecanedimethanol diacrylate, hydroxyethyl acrylate, tricyclodecanedimethanol, a copolymer of THF and 3-methyl-THF, N-vinyl-2-pyrrolidone and isobornyl acrylate and combined with bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide to give a radiation-curable compn.

IT 162881-26-7, Bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide

(photoinitiator; liq. radiation-curable resin compns. for use in optical fiber coatings)

RN 162881-26-7 HCA

CN Methanone, 1,1'-(phenylphosphinyldiene)bis[1-(2,4,6-trimethylphenyl)-  
(CA INDEX NAME)



IC ICM C08K005-5397

ICS C08L075-16; C09D175-16

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 42

IT Inks

Optical cables

(liq. radiation-curable resin compns. for use in optical fiber coatings)

IT 162881-26-7, Bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide

(photoinitiator; liq. radiation-curable resin compns. for use in optical fiber coatings)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT